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बैंक परीक्षाओ के लिए निश्चित रूप से सर्वश्रेष्ठ मॉक टेस्ट सीरीज
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## 200 Sequential Output Tracing Questions for Bank Exams. (Level : Easy to Moderate)

$$
\text { Set - } 1
$$

Directions: Study the following information carefully to answer these questions:
A number sorting machine when given an input of numbers, rearranges them in a particular manner step-by-step as indicated below till all the numbers are arranged. Given below is an illustration of this arrangement.

| Input | $:$ | 39 | 121 | 48 | 18 | 76 | 112 | 14 | 45 | 63 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I : | 14 | 39 | 121 | 48 | 18 | 76 | 112 | 45 | 63 | 96 |
| Step II : | 14 | 39 | 48 | 18 | 76 | 112 | 45 | 63 | 96 | 121 |
| Step III : | 14 | 18 | 39 | 48 | 76 | 112 | 45 | 63 | 96 | 121 |
| Step IV : | 14 | 18 | 39 | 48 | 76 | 45 | 63 | 96 | 112 | 121 |
| Step V : | 14 | 18 | 39 | 45 | 48 | 76 | 63 | 96 | 112 | 121 |
| Step VI : | 14 | 18 | 39 | 45 | 48 | 63 | 76 | 96 | 112 | 121 |
| And Step VI is the last step for this input. |  |  |  |  |  |  |  |  |  |  |

1. What will be Step III for the following input? Input : $68 \quad 182 \quad 39 \quad 93 \quad 129 \quad 46$
A. $21 \quad 39 \quad 68 \quad 129 \quad 93 \quad 46 \quad 58 \quad 182$
B. $\begin{array}{llllllll}21 & 39 & 68 & 93 & 129 & 46 & 58 & 182\end{array}$
C. $21 \quad 68 \quad 39 \quad 93 \quad 129 \quad 46 \quad 58 \quad 182$
D. Can't be determined
E. None of these
2. Given below is the fifth step of an input. What will be the third step?

Step V : $17 \begin{array}{llllllllll}32 & 43 & 82 & 69 & 93 & 49 & 56 & 99 & 106\end{array}$
A. 173282436993495699106
B. 173282694393495699106
C. 173282699343495699106
D. 173282694393564999106
E. Can't be determined
3. What will be the last step for the following input?

Input: $\begin{array}{lllllllll}138 & 63 & 49 & 93 & 89 & 122 & 32 & 71\end{array}$
A. $3249 \quad 63 \quad 71 \quad 89 \quad 93122 \quad 138$
B. $32 \quad 49 \quad 63 \quad 71 \quad 93 \quad 89 \quad 122 \quad 138$
$\begin{array}{llllllll}\text { C. } 32 & 49 & 71 & 63 & 89 & 93 & 122 & 138\end{array}$
D. Can't be determined
E. None of these
4. How many steps will be required for getting the final output for the following input? Input: $\begin{array}{lllllllllll}101 & 85 & 66 & 49 & 73 & 39 & 142 & 25 & 115 & 74\end{array}$
A. Five
B. Seven
C. Six
D. Eight
$E$. None of these
5. What will be the third step for the following input?

Input: 6723581594612374
A. 2367584615912374
B. 2367584612374159
C. 2346675812374159
D. 2346675874123159
E. Can't be determined

Set -2
A number sorting machine when given an input of numbers, rearranges them in a particular manner step-by-step as indicated below till all the numbers are arranged. Given below is an illustration of this arrangement.

| Input | $:$ | 39 | 121 | 48 | 18 | 76 | 112 | 14 | 45 | 63 | 96 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | 14 | 39 | 121 | 48 | 18 | 76 | 112 | 45 | 63 | 96 |
| Step II | $:$ | 14 | 39 | 48 | 18 | 76 | 112 | 45 | 63 | 96 | 121 |
| Step III | $:$ | 14 | 18 | 39 | 48 | 76 | 112 | 45 | 63 | 96 | 121 |
| Step IV | $:$ | 14 | 18 | 39 | 48 | 76 | 45 | 63 | 96 | 112 | 121 |
| Step V | $:$ | 14 | 18 | 39 | 45 | 48 | 76 | 63 | 96 | 112 | 121 |
| Step VI | $:$ | 14 | 18 | 39 | 45 | 48 | 63 | 76 | 96 | 112 | 121 |

And Step VI is the last step for this input.
6. What will be Step III for the following input? Input: $68 \quad 182 \quad 39 \quad 93 \quad 129 \quad 46 \quad 21 \quad 58$
A. $213968129 \begin{array}{llllll} & 33 & 46 & 58 & 182\end{array}$
B. $21 \quad 3968931294658182$
C. $21 \begin{array}{llllllllll}68 & 39 & 93 & 129 & 46 & 58 & 182\end{array}$
D. Can't be determined
E. None of these
7. Given below is the fifth step of an input. What will be the third step? Step V : $17 \begin{array}{llllllllll}32 & 43 & 82 & 69 & 93 & 49 & 56 & 99 & 106\end{array}$
A. 173282436993495699106
B. 173282694393495699106
C. 173282699343495699106
D. $17 \quad 32 \quad 82694393564999106$
E. Can't be determined
8. What will be the last step for the following input? $\begin{array}{lllllllll}\text { Input : } & 138 & 63 & 49 & 93 & 89 & 122 & 32 & 71\end{array}$
A. $3249 \begin{array}{llllll}63 & 71 & 89 & 93 & 122 & 138\end{array}$
B. $32 \quad 4963719389122138$
C. $32 \quad 49716389 \begin{array}{lllllll} & 72 & 138\end{array}$
D. Can't be determined
E. None of these
9. How many steps will be required for getting the final output for the following input? Input: $\begin{array}{llllllllll}101 & 85 & 66 & 49 & 73 & 39 & 142 & 25 & 115 & 74\end{array}$
A. Five
B. Seven
C. Six
D. Eight
E. None of these
10. What will be the third step for the following input? 6723581594612374
A. 2367584615912374
B. 2367584612374159
C. 2346675812374159
D. 2346675874123159
E. Can't be determined

$$
\text { Set }-3
$$

A word arrangement machine when given an input line of words rearranges them following a particular rule in each step. The following is an illustration of input and various steps rearrangement.

Input : Holocaust 14 Oblivion 53 Entrepreneur 29 Transformation 37 Petrichor 22 Disadvantageous 57
Step 1: 22 Holocaust 14 Oblivion 53 Entrepreneur 2937 Petrichor Disadvantageous 57 Transformation
Step 2: 22 Oblivion Holocaust 1453 Entrepreneur 37 Petrichor 29 Disadvantageous 57 Transformation
Step 3: 22 Oblivion 14 Holocaust 5337 Petrichor Entrepreneur 29 Disadvantageous 57 Transformation
Step 4: 22 Oblivion 14 Holocaust 53 Petrichor 37 Entrepreneur 29 Disadvantageous 57 Transformation And Step IV is the last step of the arrangement as the desired arrangement is obtained. As per rules followed in the above steps, find out in each of the questions the appropriate step for the given input.

## Input for the questions:

Entertainment 25 Thankful 49 Congratulations 32 Ambulance Anniversary 6338

## 11. What is the position of the word 'Thankful' in the 4th step?

A. Fourth from the right
B. Fourth from the left
D. Sixth from the right
$E$. None of these
C. Fifth from the left
12. Which is the third element to the right of the seventh element from the right end in the second last step?
A. Entertainment
B. 63
C. Thankful
D. 38
E. None of these
13. How many steps will be required to complete the arrangement?
A. 3
B. 5
C. 4
D. 2
E. None of these
14. Which of the following steps will be the last but one?
A. 5
B. 4
C. 3
D. 6
E. None of these
15. How many elements are there between 'Entertainment' and 'Ambulance' in the second last step?
A. 4
B. 3
C. 5
D. 6
E. None of these

## Set - 4

A word arrangement machine when given an input line of words rearranges them following a particular rule in each step. The following is an illustration of input and various steps rearrangement.

Input:things 05 in 17 the 14 life 21 little 24 enjoy
Step 1: in things 2550 the 17 life 05 little 20 enjoy
Step 2: in the things 520571 life 50 little 02 enjoy
Step 3: in the life things 29255025 little 04 enjoy
Step 4: in the life enjoythings $925205 \quad 52$ little 40
Step 5: in the life enjoy little things $\begin{array}{llllll}16 & 12 & 10 & 12 & 09\end{array}$
Step 6: in the life enjoy little things $\begin{array}{llllll}16 & 12 & 12 & 10 & 09\end{array}$
And Step VI is the last step of the arrangement as the desired arrangement is obtained. As per rules followed in the above steps, find out in each of the questions the appropriate step for the given input.

Input for the questions:
in believe 1309 have 27 to 23 you 35 yourself
16. Which is the third element to the right of the sixth element from the right end in the second last step?
A. 06
B. yourself
C. 12
D. 16
E. None of these
17. How many steps will be required to complete the arrangement?
A. Three
B. Five
C. Four
D. Six
E. None of these
18. What is the sum of numbers in the step 4?
A. 174
B. 52
C. 162
D. 135
E. None of these
19. What is the position of the word 'believe' in the 4th step?
A. Third to the left
B. Fourth to the right
C. Seventh from the right
D. fifth to the right E .
. Sixth from the left
20. Which of the following steps will be the last but one?
A. 4
B. 6
C. 3
D. 5
E. None of these

## Set -5

A word \& number arrangement machine when given an input line of words \& numbers rearranges them following a particular rule in each step. The following is an illustration of an input \& its rearrangement.

Input : sell 11 keep 23 day 63 small 49 clock 58 pain 88
Step 1 : 89 clock sell 11 keep 23 day 63 small 4958 pain
Step 2 : 62 day 89 clock sell 11 keep 23 small 4958 pain
Step 3 : 59 keep 62 day 89 clock sell 1123 small 49 pain
Step 4 : 48 pain 59 keep 62 day 89 clock sell 1123 small Step 5 : 22 sell 48 pain 59 keep 62 day 89 clock 11 small
Step 6 : 10 small 22 sell 48 pain 59 keep 62 day 89 clock

Step 6 is the last step of the above input as per rules followed in the above steps.
Following is the input which needs to be rearranged as per the above logic.
Input: vast 78 code 47 bill 29 flat 38 like 25 upper 69
21. Which of the following is exactly in the middle of 'like' and 'bill' in step 4?
A. code
B. 68
C. Vast
D. Flat
$E$. None of these
22. "29 38 like" is seen in the same sequence for the first time in which of the following steps?
A. Step 1
B. Step 2
C. Step 3
D. Step 4
$E$. None of these
23. Which of the following is third to the left of the element which is eight from the right end in step 5 ?
A. Upper
B. 38
C. 28
D. like
E. none of these
24. Which of the following steps is " 68 code $\mathbf{7 9}$ bill vast $\mathbf{4 7} 29$ flat $\mathbf{3 8}$ like $\mathbf{2 5}$ upper"?
A. Step 1
B. Step 2
C. Step 3
D. Step 5
E. None of these
25. What is the difference between the sum of odd numbers and the sum of even numbers in step 6?
A. 68
B. 32
C. 24
D. 48
E. 40

$$
\text { Set - } 6
$$

Directions: An alphanumeric machine accepts letters as input and delivers output in form of numbers through different steps. Each step is obtained by applying an operation different from the previous step. Each step gives output taking input from the previous step. Below mentioned is an illustration of the same.

Input: glory gained through resolving conflict between these personalities
Step1: 861012128614

Step2: 2248
Step3: 24
Step4: 10
Step4 is the final output.
On the basis of above illustration find the output and different steps for the following input.
Input: decreasing glaciers result from the melting snow valley
26. What is the cube of the value that is obtained as final output?
A. 729
B. 343
C. 125
D. 216
E. None of these
27. Which of the following is the numeric code for 'melting' as per the given pattern?
A. 12
B. 14
C. 10
D. Can't be determined
E. None of these
28. Four of the following are alike in some way and thus form a group, which is the one that does not belong to the group?
A. 6
B. 8
C. 12
D. 10
E. 16
29. Which of the following is the correct code for 'snow glaciers" as per the given pattern respectively?
A. 6 and 10
B. 10 and 7
C. 9 and 7
D. 6 and 14
E. None of these
30. Which of the following is the difference between the sum of the numbers of step 2 and sum of the numbers of step 3 ?
A. 6
B. 5
C. 4
D. 8
E. None of these

$$
\text { Set }-7
$$

Directions (31-40): A word \& number arrangement machine when given an input line of words \& numbers rearranges them following a particular rule in each step. The following is an illustration of an input \& its rearrangement.

Input: live 26 life 19 king 38 size 42 aim 67 my 71
Step 167 live 26 life 19 king 38 size 42 my 71 aim Step 23867 live 26 life 19 size 42 my 71 aim king Step 3263867 live 19 size 42 my 71 aim king life Step 419263867 size 42 my 71 aim king life live Step 54219263867 size 71 aim king life live my Step 6714219263867 aim king life live my size

Step 6 is the last step of the above input as per rules followed in the above steps.
Following is the input which needs to be rearranged as per the above logic.
Input: dream 25 dare 64 enjoy 18 smile 23 spread 47 joy 70
31. Which of the following is second to the left of fourth to the right of ' 64 ' in step 1 ?
A. smile
B. 23
C. 18
D. joy
E. None of these
32. Which of the following is third to the left of fifth element from the right end in step 6?
A. 64
B. 23
C. 47
D. dare
E. None of these
33. Which of the following steps is "25 644718 smile 23 spread joy 70 dare dream enjoy"?
A. Step 5
B. Step 2
C. Step 3
D. Step 4
E. None of these
34. In which of the following steps "spread 70 dare" is seen in the same sequence for the first time?
A. Step 1
B. Step 2
C. Step 3
D. Step 4
E. None of these
35. In step 5 , which of the following is exactly between ' 47 ' and 'joy'?
A. 70
B. dare
C. dream
D. enjoy
E. None of these

$$
\text { Set }-8
$$

Input : tension 26 releases 18 because 71 you 5 watch movies 6124
Step 1: because 5 tension 26 releases 1871 you watch movies 6124
Step 2: releases 18 because 5 tension 2671 you watch movies 6124
Step 3: movies 24 releases 18 because 5 tension 2671 you watch 61
Step 4: tension 26 movies 24 releases 18 because 571 you watch 61
Step 5: you 61 tension 26 movies 24 releases 18 because 571 watch
Step 6: watch 71 you 61 tension 26 movies 24 releases 18 because 5

Find the different steps of output using the above mentioned logic for the following input.

Input: calcium 47 makes 56 body 70 more 21 strong glowing 9210
36. What is the average of the numbers between 'glowing' and 'makes' in step 2?
A. 46
B. 35
C. 21
D. 26
$E$. None of these
37. "makes 47 glowing 21 calcium 1056 body 70 more strong 92 " is which of the following steps?
A. Step 5
B. Step 4
C. Step 3
D. Step 2
E. None of these
38. In step 6, sum of the numbers which are third from the right end and sixth from the left end is equal to which of the following numbers?
A. 77
B. 126
C. 87
D. 91
E. None of these
39. Which of the following word/number is third to the right of fifth from the left of 'more' in step 3?
A. 56
B. body
C. 70
D. calcium
E. None of these
40. In which of the following steps " 56 makes 47 " is seen in the same sequence for the first time?
A. Step 2
B. Step 3
C. Step 4
D. Step 6
E. None of these

$$
\text { Set }-9
$$

Directions: A number arrangement machine when given an input line of numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: 62973874551286456822
Step 1: 13629738745586456823
Step 2: 39136297745586682346
Step3: 56391397748668234663
Step 4: 69563913978623466375
Step 5: 87695639132345637598
Find the different steps of output using the above mentioned logic for the following input.
Input: 88592894377515647148
41. Which of the following number is 5 th to left of 49 in step 4?
A. 60
B. 38
C. 16
D. 72
E. None of these
42. How many numbers are there between the one which is 3rd from the right end and 38 in step 3?
A. Four
B. One
C. More than four
D. Two
E. None of these
43. How many numbers are there between 72 and the one which 4 th to left of 76 in step 5 ?
A. Three
B. Two
C. None
D. More than three
E. None of these
44. What is the position of $\mathbf{8 8}$ from the right end in last but one step?
A. Fourth
B. Fifth
C. Sixth
D. Third
E. None of these
45. Which of the following number is 7 th from the left end in step 5 ?
A. 29
B. 65
C. 76
D. 49
E. None of these

$$
\text { Set - } 10
$$

Directions: A word and number arrangement machine, when given an input line of words and numbers, rearranges them following a different rule in each step. The following is an illustration of input and rearrangement.

Input: nature create nothing useless without purpose
Step I: aceert aenrtu eelsssu eopprsu ghinnot hiottuw
Step II: 454131272411
Step III: 8826
Step IV: 1652
Step V: 16
Step V is the last step of the arrangement.
Following the same pattern solve the given input.
Input: imagine yourself trapped inside hellish nightmare
46. What will be the value obtained in final step of the arrangement?
A. 32
B. 38
C. 45
D. 54
E. 68
47. Which of the following will not be in step I of the given arrangement?
A. aegiimn
B. aeghinmrt
C. ehhills
D. deiins
E. eflorsuy
48. What would be the sum of the values that obtained in step III?
A. 65
B. 58
C. 66
D. 74
E. 52
49. Which one of the numbers is representing 'nightmare' in step II?
A. 15
B. 6
C. 24
D. 27
E. 11
50. How many numbers that obtained in step II is/are prime numbers?
A. More than three
B. None
C. One
D. Two
E. Three

$$
\text { Set - } 11
$$

Directions: A word and number arrangement machine, when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: hard 27 nut 14 impossible 54 to 86 crack 62 Step1:54 hard 27 nut 14 impossible 86 crack 62 to Step2:86 54 hard 2714 impossible crack 62 to nut Step3:14 8654 hard 27 crack 62 to nut impossible Step4:62 14865427 crack to nut impossible hard Step5:27 62148654 to nut impossible hard crack Step 5 is the final output.

Find the different steps of output using the above mentioned logic for the following input.
Input: deeds 39 for 96 humanity 75 give 27 pleasure 62
51. Which of the following elements is third to the left of fifth element from right end in step 3?
A. crack
B. 75
C. deeds
D. 39
E. None of these
52. Four of the following five are alike in a certain way and thus form a group. Which of the following does not belong to the group?
A. for -27
B. pleasure - 75
C. 96 - deeds
D. 39 - pleasure
E. pleasure - 27
53. In which of the following steps, 96 is seen exactly between 62 and 75 for the first time?
A. Step 1
B. Step 3
C. Step 4
D. Step 5
E. None of these
54. Which of the following is second to the right of ' 39 ' in step 4?
A. 75
B. humanity
C. 96
D. pleasure
E. None of these
55. What is the sum of the digits of the numbers which are second from left end and fourth from right end in step 3 ?
A. 35
B. 29
C. 36
D. 40
E. 24

$$
\text { Set - } 12
$$

Directions: A word and number arrangement machine, when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: developer 76 carpenter 53 duster 61 per 24 storekeeper 38
Step1: 26 developer 76 carpenter 53 duster 61 storekeeper 38 per
Step2: 4026 developer 76 carpenter 5361 storekeeper per duster
Step3: 514026 developer 7661 storekeeper per duster carpenter
Step4: 5951402676 storekeeper per duster carpenter developer
Step5: 7859514026 per duster carpenter developer storekeeper
Step 5 is the final output.
Find the different steps of output using the above mentioned logic for the following input.
Input: flip 64 championship 37 internship $\mathbf{2 9}$ philip 71 companionship 55
56. In which of the following steps "internship 71" is seen in the same sequence for the first time?
A. Step 1
B. Step 2
C. Step 3
D. Input
E. None of these
57. How many words are to the right of ' 27 ' in step 4?
A. Three
B. Two
C. Five
D. Four
E. More than five
58. What is the difference between the highest and the lowest numbers of step 3 ?
A. 51
B. 28
C. 44
D. 36
E. None of these
59. Which of the following elements is fourth to the left of 'internship' in step $\mathbf{5}$ ?
A. 53
B. 35
C. flip
D. 27
E. None of these
60. Which of the following elements is/are between 'internship' and 'flip' in step 2?
A. 71 and 55
B. companionship
C. 55 and companionship
D. Both $A$ and $B$
E. None of these

$$
\text { Set - } 13
$$

Directions: A word and number arrangement machine, when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: fire 76 for 53 fauna 14 favour 27 freedom 36
Step1: 78 fauna fire for 5314 favour 27 freedom 36
Step2: 51 favour 78 fauna fire for 1427 freedom 36
Step3: 38 freedom 51 favour 78 fauna fire for 1427
Step4: 25 fire 38 freedom 51 favour 78 fauna for 14
Step5: 16 for 25 fire 38 freedom 51 favour 78 fauna
Find the different steps of output using the above mentioned logic for the following input.
Input: prison $\mathbf{2 4}$ pirates 61 proxy 70 prone 53 prejudice 17
61. Which of the following steps is the step 3 of the given input?
A. 51 prone prison 59 pirates 72 prejudice 24 proxy 17
B. 59 pirates 72 prejudice prison 24 proxy prone 5317
C. 51 prison 59 pirates 72 prejudice 24 proxy prone 17
D. prison 59 pirates 72 prejudice 24 proxy 51 prone 17
E. None of these
62. Which of the following is third to the right of the one which is third from the left end in step1?
A. pirates
B. 53
C. prone
D. 61
E. proxy
63. Which of the following comes exactly between 'prone' and 'pirates' in step 4?
A. prison
B. 51
C. 53
D. All of these
E. None of these
64. In which of the following steps 'prison 59 pirates' is seen in the same sequence for the first time?
A. Step 1
B. Step 3
C. Step 2
D. Step 5
E. Step 4
65. What is the difference between the sum of all the prime numbers and the sum of all the even numbers in step 2?
A. 22
B. 29
C. 33
D. 28
E. 45

$$
\text { Set }-14
$$

Directions: A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: fruit 29 frozen 71 vegetable 46 cultivation 39 fertilizers 52
Step I: 52 fruit 29 frozen 71 vegetable 46 cultivation 39 fertilizers
Step II: 52 fertilizers fruit 29 frozen 71 vegetable 46 cultivation 39
Step III: 52 fertilizers 71 fruit 29 frozen vegetable 46 cultivation 39
Step IV: 52 fertilizers 71 cultivation fruit 29 frozen vegetable 4639
Step V: 52 fertilizers 71 cultivation 46 fruit 29 frozen vegetable 39
Step VI:52 fertilizers 71 cultivation 46 vegetable fruit 29 frozen 39
Step VII:52 fertilizers 71 cultivation 46 vegetable 29 fruit frozen 39
Step VIII: 52 fertilizers 71 cultivation 46 vegetable 29 frozen fruit 39
Step IX: 52 fertilizers 71 cultivation 46 vegetable 29 frozen 39 fruit
Step IX is the final output.
Find the different steps of output using the above mentioned logic for the following input.
Input: roam 12 countries 37 travelling 59 across 63 globe 94
66. After completion of step III, how many more steps are needed to reach the final output?
A. 7
B. 6
C. 5
D. 9
E. 4
67. Which of the following is fourth to the right of second element from left end in step III?
A. roam
B. 63
C. 37
D. 59
E. countries
68. Which of the following sequence of elements is unique?
A. countries 3759
B. countries 37 across
C. Both option A and B
D. countries roam 37
E. None is unique
69. How many words are there between the third element from left end and second element from right end in step VIII?
A. Three
B. Two
C. Four
D. Five
E. None of these
70. Which of the following is third to the left of 'across' in the final output?
A. travelling
B. 63
C. globe
D. 59
E. None of these

Directions: An alphanumeric machine accepts letters as input and delivers output in form of numbers through different steps. Each step is obtained by applying an operation different from the previous step. Each step gives output taking input from the previous step. Below mentioned is an illustration of the same.

Input: shady sun made weather pleasant to roam around
Step1: 8661010468
Step2: 48604048
Step3: 128
Step4: 10
Step4 is the final output.
On the basis of above illustration find the output and different steps for the following input. Input: early to bed keeps your mind fit robust
71. What is the sum of the digits of the value that is obtained as final output?
A. 4
B. 5
C. 6
D. 7
E. None of these
72. Which of the following is the difference between the sum of numbers that are greater than 7 and the sum of numbers that are less than 7 in step 1?
A. 7
B. 5
C. 4
D. 6
E. None of these
73. Four of the following five are alike in a certain way and thus form a group. Which of the following does not belong to the group?
A. $36-6$
B. $48-12$
C. $32-4$
D. 16-4
E. $42-14$
74. Which of the following is the square of the sum of the digits of step 3 ?
A. 100
B. 49
C. 64
D. 81
E. None of these
75. What is the sum of the numbers that are second from left end and second from right end in step 2?
A. 62
B. 84
C. 59
D. 75
E. 49

$$
\text { Set - } 16
$$

Directions: A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in every step. The following is an illustration of input and rearrangement.

Input: 88256856588394
Step I: 88682556588394
Step II: 88689425565883
Step III: 88689458255683
Step IV: 88689458832556
Step V: 88689458835625
Step V is the last step of the arrangement.
Following the same pattern solve the questions given below.
76. Which of the following will be step III of the input '87 37549846 29'?
A. 988729374654
B. 988729463754
C. 879829374654
D. 988729465437
E. None of these
77. How many steps will be required to complete the arrangement '38 7126933744 54’?
A. II
B. III
C. IV
D. V
$E$. None of these
78. Which of the following would be the input step for the arrangement whose step IV is '75 496345531626 41'?
A. 4575495316266341
B. 4549531663752641
C. 7563495345164126
D. 1663455349752641
E. Can't be determined
79. Which of the following will be step IV of the input '90 29728455 76'?
A. 847655299072
B. 768429559072
C. 847655297290
D. 768429729055
E. None of these
80. Which of the following will be '95 77495682 37' of the input ' 8249567795 37’?
A. III
B. IV
C. $V$
D. VI
E. None of these

$$
\text { Set }-17
$$

Directions: An alphanumeric machine accepts letters as input and delivers output in form of numbers through different steps. Each step is obtained by applying an operation different from the previous step. Each step gives output taking input from the previous step. Below mentioned is an illustration of the same.
Input: spread joy laughter by sharing smile with masses

Step1: 921156479
Step2: 99104236
Step3: 5726
Step4: 5
Step4 is the final output.
On the basis of above illustration find the output and different steps for the following input.
Input: being good to everyone sometimes invite sad trouble
81. If ' 3 ' is added to one of the values of step 3 then what would be its consequence on the final output?
A. Final output will remain indifferent
B. Final output will be decreased by 2
C. Final output will be decreased by 1
D. Final output will be increased by 2
E. Final output will be increased by 1
82. What is the square of the sum of the numbers of step 3 ?
A. 729
B. 676
C. 784
D. 529
E. None of these
83. If in the given input 'sad' is replaced by "so" then which of the following values of step 2 will change?
A. 20
B. 16
C. 77
D. 54
E. None of the values will change
84. Four of the following are similar in a certain way and thus form a group. Which of the following does not belong to the group?
A. 22
B. 1
C. 55
D. 3
E. 10
85. What is the difference between the sum of all the even numbers of step 2 and the sum of all the odd numbers of step 3 ?
A. 77
B. 85
C. 67
D. 46
E. 38

$$
\text { Set - } 18
$$

Directions: A word and number arrangement machine, when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: name 72 nest 24 near 35 nostalgic 43 narrow 67
Step1: 72 nest near 35 nostalgic 43 narrow 67 name 242
Step2: 72 nest near nostalgic 4367 name 242 narrow 335
Step3: 72 nest nostalgic 67 name 242 narrow 335 near 343
Step4: 72 nostalgic name 242 narrow 335 near 343 nest 367
Step5: name 242 narrow 335 near 343 nest 367 nostalgic 722
Step 5 is the final output.
Find the different steps of output using the above mentioned logic for the following input.
Input: team 55 taboo 48 tackle 83 tissue 69 test 11.
86. In which of the following steps, 'taboo' is placed at third from the left end?
A. Step 1
B. Input
C. Step 4
D. Either A or B
E. None of these
87. Which of the following is the final output?
A. taboo 311 tackle 482 test 355 team 369 tissue 383
B. taboo 311 tackle 482 team 355 test 369 tissue 383
C. tissue 383 taboo 311 tackle 482 team 355 test 369
D. tackle 482 team 355 test 369 tissue 383 taboo 311
E. None of these
88. What is the difference between the highest and the lowest numbers of step 3?
A. 268
B. 316
C. 393
D. 413
E. None of these
89. Which of the following elements is second to the left of fourth element from the right end in step 2?
A. 83
B. tissue
C. 69
D. test
E. None of these
90. In which of the following steps " 83 tissue taboo" is seen in the same sequence?
A. Step 4
B. Step 5
C. Step 3
D. Both Step 3 and step 4
E. None of these

## Set - 19

Directions: A word and number arrangement machine, when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: faster 24 and 37 rapid 61 progressive 18 requirement 85 building 93 Step I:24 faster and 37 rapid 61 progressive 18 requirement 85 building 93 Step II:24 progressive faster and 37 rapid 6118 requirement 85 building 93 Step III:24 progressive 61 faster and 37 rapid 18 requirement 85 building 93 Step IV:24 progressive 61 requirement faster and 37 rapid 1885 building 93 Step V:24 progressive 61 requirement 18 faster and 37 rapid 85 building 93 Step VI:24 progressive 61 requirement 18 building faster and 37 rapid 8593 Step VII:24 progressive 61 requirement 18 building 37 faster and rapid 8593 Step VIII:24 progressive 61 requirement 18 building 37 faster 93 and rapid 85 Step IX:24 progressive 61 requirement 18 building 37 faster 93 rapid and 85 Step X: 24 progressive 61 requirement 18 building 37 faster 93 rapid 85 and

Step X is the final output.
Find the different steps of output using the above mentioned logic for the following input.
Input : technology $\mathbf{4 7}$ transfer $\mathbf{2 6}$ rate $\mathbf{7 2}$ achieving 51 extra 91 version 32
91. How many steps are needed to reach the final output?
A. Ten
B. Nine
C. Eight
D. Eleven
E. None of these
92. Which of the following is fourth to the left of '47' in step VI?
A. version
B. 51
C. transfer
D. 26
E. 91
93. In which of the following steps "version 9147 rate" is seen in the same sequence?
A. Step IX
B. Step VIII
C. Both A or B
D. Step VII
E. None of these
94. Which of the following comes exactly between 51 and 91 in step III?
A. rate
B. 26
C. extra
D. 72
E. None of these
95. Which of the following is seventh from the right end in final output?
A. transfer
B. achieving
C. extra
D. 72
E. None of these

## Set - 20

Direction: A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in every step. The following is an illustration of input and rearrangement.

Input: 79 create history 88 imagined 94 every 63 leader 96
Step I: 8879 create history imagined 9463 leader 96 every
Step II: 887996 history imagined 9463 leader every create
Step III: 887996 history imagined 9463 every create leader Step IV: 88799694 imagined 63 every create leader history Step V: 8879969463 every create leader history imagined Step V is the last step of the arrangement.

Following the same pattern solve the given input.
Input: never 42 leaved 39 important object 5346 anyplace 74
96. How many steps will be required to complete the given input?
A. Three
B. Seven
C. Six
D. Five
E. Four
97. Which of the following steps will be last but one of the given input?
A. 39744653 important 42 never leaved object anyplace
B. 3974465342 important never leaved object anyplace
C. 3974464253 never leaved object anyplace important
D. 3974465342 important never object leaved anyplace
E. None of these
98. Which of the following will be on the immediate right of 'Important' in step III?
A. Object
B. Never
C. 42
D. Anyplace
E. 53
99. How many element(s) will be there between ' 74 ' and 'leaved' in Step IV?
A. Six
B. Four
C. Seven
D. Five
E. Three
100. What is the position of 'Object' in step V?
A. Third from right end
B. Second from left end
C. Seventh from left end
D. Fourth from right end
E. None of these

## Set - 21

Directions: A word and number arrangement machine when given an input line of words and numbers rearranges them following a different rule in each step. The following is an illustration of input and rearrangement.

Input: always begin from bottom mount high
Step I: aabdho eimty inou ggnooy gmnou isst
Step II: 3443123249
Step III: 481872
Step IV: 39
Step V: 144

Step V is the last step of the arrangement.
Following the same pattern solve the given input.
Input: fear creates demons only hope defeat
101. What will be the value obtained in final step of the arrangement?
A. 36
B. 26
C. 81
D. 49
E. 72
102. What is the product of the numbers obtained in step IV?
A. 36
B. 16
C. 24
D. 18
E. 12
103. Which of the following numbers will represent 'Fear' in step II?
A. 36
B. 38
C. 25
D. 20
E. 18
104. Which of the following words will be obtained in step I?
A. aeit
B. aeefhix
C. ehmmow
D. bmop
E. aeeguw
105. What is the sum of the numbers obtained in step III?
A. 108
B. 282
C. 96
D. 42
E. 216

Directions: Read the given information carefully and answer the questions given beside:
The first step is the resultant of the product and sum of the digits in input as per the lines indicated. Further steps are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step 1. Each step is a resultant of previous step.

Input:


Step 1:
Step 2:

| 8 | 0 |
| :--- | :--- |


| 6 | 0 |
| :--- | :--- |

Step 3 :

| 2 | 0 |
| :--- | :--- |

Step 4 :
106. Which one of the following is half of the value obtained in final step?
A. 151250
B. 142870
C. 160080
D. 202500
E. None of these
107. Which one of the following is a number obtained in step II?
A. 1550
B. 1650
C. 1200
D. 1100
E. None of these
108. Find the difference of the numbers obtained in step II?
A. 660
B. 550
C. 630
D. 420
E. None of these
109. Which one of the following is one of the numbers obtained in step I ?
A. 32
B. 44
C. 56
D. 50
E. None of these
110. Which one of the following is the required final step?
A. Step V
B. Step VI
C. Step IV
D. Step VII
E. None of these

Join us

## Set - 23

Directions: A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: variety 35 spices 21 for 79 good 54 taste 46
Step I: for variety 35 spices 2179 good 54 taste 46
Step II: good for variety 35 spices 7954 taste 4621
Step III: taste good for variety 35 spices 54462179
Step IV: spices taste good for variety 5446217935
Step V: variety spices taste good for 4621793554
Step V is the last step.
Find the various steps and final output for the input given below.
Input: strong 64 relation 25 depends 38 on 53 base 45
111. Which of the following represents the fifth element from left end in step IV and fourth element from right end in step II respectively?
A. relation -38
B. 25-53
C. relation - base
D. relation - 53
E. None of these
112. What is the difference of the odd numbers that come between 'strong' and 'base' in step I?
A. Only one odd number comes in between
B. 14
C. 28
D. No odd number comes in between
E. Can't be determined
113. With respect to the step $V$, Four of the following five are alike in a certain way and thu form a group. Which of the following does not belong to that group?
A. 38
B. base
C. depends
D. 53
E. 45
114. Which of the following elements is third to the left of fourth element from right end in step III?
A. 53
B. relation
C. base
D. depends
E. None of these
115. What is the sum of the numbers that are towards the right of 'base' in step I?
A. 109
B. 102
C. 91
D. There is only one number
E. None of these

Directions: Study the following information carefully and answer the questions given beside:
A number arrangement machine arranges two digit numbers in a certain manner. Step-1 is obtained by taking the difference of the numbers given in Input on the basis of given arrows. Each step is obtained by applying an operation different from the previous step. Each step gives output taking input from the previous step.


Step 2:

| 2 | 6 |
| :--- | :--- |


| 8 | 6 |
| :--- | :--- |

Step 3:
10
12

Step 4:
Using the above illustration solve the following input:

116. What would be the difference of the sum of the digits of both boxes of step-2?
A. 4
B. 7
C. 11
D. 6
E. 9
117. What would be the sum of both the boxes of step-3?
A. 36
B. 48
C. 16
D. 32
E. 24
118. Which of the following numbers will be present in step-1?
A. 84
B. 62
C. 46
D. Both 84 and 62
E. All of these
119. What would be the sum of the digits present in step-4?
A. 7
B. 16
C. 10
D. 12
E. 9
120. Which of the following combinations correctly represents the 1st digit of 3rd box from right end, 2nd digit of 1st box from left end and 2nd digit of middle box of step-1?
A. [8|6|6]
B. [2|6|4]
C. [4|8|2]
D. $[6|0| 4]$
E. [2|8|6]

## Set - 25

Directions: Study the following information carefully and answer the questions given beside:
A letter arrangement machine arranges two letters into a typical manner. Each step is obtained by applying an operation different from the previous step. Each step gives output taking input from the previous step.


C Y

## ZD

Using the above illustration solve the following input:
121. Which of the following vowel(s) is not present in step-2?
A. E
B. 0
C. U
D. Both E and U
E. All of these
122. What would be the sum of the numerical position of the letters of both boxes of step3 ?
A. 31
B. 18
C. 26
D. 20
E. 39
123. Which of the following letter(s) is/are present in step-2?
A. F
B. K
C. W
D. Both K and W
E. All of these
124. How many letters are there in the english alphabet series between the letters present in step-4?
A. 5
B. 9
C. 4
D. 2
E. 11
125. Which of the following word(s) can be formed using the letters present in step-1?
A. AIR
B. NET
C. TIP
D. RAT
E. LIP

Directions: Study the following information carefully and answer the questions given beside:
The first step has been obtained by multiplying the digits in input. The next steps are not obtained the same way. They are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step 1. Each step is a resultant of previous step.

126. Which of the following will be the last step?
A. 6
B. 7.5
C. 3.5
D. 5
E. None of these
127. What is the sum of the numbers of step III?
A. 9
B. 12
C. 18
D. 26
E. None of these
128. If we do half of each number in step II, what will be the difference of those numbers?
A. 0
B. 1
C. 2
D. 3
E. None of these
129. Which of the following is a number in step I?
A. 64
B. 32
C. 69
D. 67
E. None of these
130. If the sum of numbers of step III is multiplied by step IV, find the resultant number.
A. 31.5
B. 50
C. 26.4
D. 37.5
E. None of these

Directions: A number and arrangement machine when arranges an input line of words and numbers rearranges them following a particular logic at each step. Below mentioned is an illustration of the same.

Input: drink 25 milk 38 daily 47
daily drink milk 253847
251111102428
milk drink 38 daily 4725
drink milk daily 472538

The above mentioned steps are the steps to get the final output but are not in the correct sequence. You have to arrange the steps as per the conditions given below.
I. The step that starts with a word that has even number of letters is an odd numbered step.
II. The step number of the step that starts as well as ends with a number is a perfect square.
III. The step that ends with a prime number is below at least two steps.
IV. The step that ends with a perfect square is not the second last step.

Find the different steps (in right order) for the input given below.
Input: goods 32 import 5846 value
131. Which element is third to the left of 58 in step 3 ?
A. import
B. value
C. 46
D. 32
E. None of these
132. Which of the following elements is fourth from the right end in step 4?
A. 20
B. 6
C. 19
D. 5
E. 24
133. Which of the following will come exactly between goods and import in step 2 ?
A. value
B. 32
C. 46
D. 58
E. None of these
134. Which of the following is on the immediate right of the fourth element from left end in step 2?
A. goods
B. 46
C. 32
D. 58
E. None of these
135. What is the sum of 3rd element from the left end and 2nd element from right end in step IV?
A. 29
B. 30
C. 24
D. 32
E. None of these

Directions: A number arrangement machine when given an input line of numbers rearranges them following a particular logic at each step. Below given is an illustration of the same.

Input: 3664277291288665

Step 1: 28374519635821
Step 2: 6582648212179
Step 3: 143918
Step 4: 3288
Step 5: 6
Step 5 is the last step.
On the basis of above illustration find the output and various steps for the input given below. Input: 2346876472359812
136. What is the sum of the second highest and second lowest numbers of step $\mathbf{2}$ ?
A. 124
B. 156
C. 145
D. 147
E. None of these
137. How many numbers in step 1 are fully divisible by 2 ?
A. 1
B. 2
C. 3
D. None
E. None of these
138. What is the difference of the first and last numbers of step 3 ?
A. 53
B. 83
C. 59
D. 71
E. None of these
139. Which of the following is the third number from left end in step 2 ?
A. 31
B. 64
C. 45
D. 100
E. 69
140. Find the odd one out?
A. 8
B. 64
C. 24
D. 48
E. 120

$$
\text { Set - } 29
$$

Directions: A word and number arrangement machine when arranges an input line of words and numbers rearranges them following a particular logic. An illustration of the same is given below.

Input: manage 46 time 23 work 13 create 78 explore 43 universe 84
Step I: work manage 46 time 23 create 78 explore 43 universe 8413
Step II: universe work manage 46 time create 78 explore 43841323
Step III: time universe work manage 46 create 78 explore 84132343
Step IV: manage time universe work create 78 explore 8413234346
Step V: explore manage time universe work create 781323434684
Step VI: create explore manage time universe work 132343468478
Step VI is the final output.
On the basis of above illustration find the different steps of rearrangement for the input given below.

Input: require 51decade $\mathbf{2 2}$ build 10 trust 32 once $\mathbf{8 4}$ shattered 45
141. Which of the following is third to the left of ' 51 ' in step III?
A. shattered
B. 10
C. require
D. 22
E. None of these
142. What is the sum of the numbers that come between 'trust' and 'once' in step II?
A. 107
B. 51
C. 32
D. 83
E. None of these
143. Which of the following pairs represents the elements at extreme ends in step V ?
A. once 45
B. decade 45
C. decade 51
D. once 51
E. None of these
144. Which of the following steps is - "once require shattered trust decade build 844510 2232 51"?
A. Step II
B. Step III
C. Step IV
D. Step V
E. None of these
145. What is the difference of 9th element from the right end in step III and 8th element from left end in step VI?
A. 19
B. 29
C. 25
D. 31
E. 26

Directions: A word arrangement machine when given an input line of words rearranges them following a particular logic at each step.

Input : Letters Received Box Post Office
Step I: Received Letters Box Post Office
Step II: Received Letters Office Box Post
Step III: Received Letters Office Post Box
Step IV: Box Received Letters Office Post
Step V : Box Letters Received Office Post
Step VI: Box Letters Office Received Post
Step VII: Box Letters Office Post Received
Step VII is the last step and the final output as well.
You have to find out the final output and the different steps of rearrangement for the following input.

Input: Online Recharge Website Pay Less
146. Which of the following is second to the right of fifth word from right end in step III?
A. Less
B. Website
C. Online
D. Pay
E. None of the above
147. "Less Recharge Website Online Pay" represents which of the following steps?
A. Step V
B. Step IV
C. Step II
D. Step III
E. There is no such step
148. Which of the following is the final step of the output?
A. Recharge Website Online Less Pay
B. Less Online Recharge Website Pay
C. Recharge Online Website Pay Less
D. Less Online Pay Recharge Website
E. None of these.
149. Which of the following is second to the right of "Website" in step II?
A. Online
B. Pay
C. Recharge
D. Less
E. None of the above
150. In which of the following steps, Less is placed second to the left of Recharge?
A. Step III
B. Step IV
C. Step V
D. Step VI
E. There is no such step www.smartkeeda.com | testzone.smartkeeda.com

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Directions: A word and number arrangement machine when given an input line of word and numbers arranges them following a particular logic at each step. The following is an illustration of the input and various steps to obtain the output.

Input : toy 82 craft 73 artist 55 fragment 68 wrinkle 27
Step I : 2782 craft 73 artist 55 fragment 68 wrinkle toy
Step II : 822773 artist 55 fragment 68 wrinkle toy craft
Step III: 73822755 fragment 68 wrinkle toy craft artist
Step IV: 55738227 fragment 68 toy craft artist wrinkle Step V : 6855738227 toy craft artist wrinkle fragment

Step V is the final output.
Find the final output and various steps for the following input.
Input : action 46 frog 67 jam 28 flatter 59 terrific 39
151. Which of the following is third to the left of ' 39 ' in step II?
A. 59
B. flatter
C. 67
D. action
E. None of these
152. What is the position of "terrific" in step IV?
A. Immediate left of 39
B. Immediate right of frog
C. Second to the left of 39
D. Third to the right of 46
E. None of these
153. What is the difference between the second element from right end in step I and second element from left end in step II?
A. 12
B. 9
C. 11
D. 5
E. Can't be determined
154. Which of the following words is towards the left of "jam" in step IV?
A. terrific
B. flatter
C. frog
D. All of these
E. None of these
155. Which of the following comes exactly between 39 and frog in the final output?
A. jam
B. 28
C. 46 and 28
D. jam and 28
E. All of these

Join us

Directions: A number arrangement machine when given an input line of numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: 2347526971
Step I: $1638 \quad 206417$
Step II: $1638 \quad 64 \quad 2017$
Step III: 2133300634
Step IV: $\begin{array}{llllll}06 & 21 & 24 & 30 & 33\end{array}$
Step V: $\begin{array}{llllll}11 & 27 & 31 & 38 & 42\end{array}$
Find the different steps of output using the above mentioned logic for the following input.
Input: 5629347241
156. Which of the following numbers comes in the middle in Step II?
A. 56
B. 40
C. 48
D. 74
E. None of these
157. Which of the following numbers is not present in Step IV?
A. 15
B. 12
C. 30
D. 16
E. All are present
158. On which step we get the output: '30 121218 15' ?
A. Step I
B. Step II
C. Step III
D. Can't be determined
E. None of these
159. What is the position of 24 in Step II?
A. 3rd from the left end
B. Exactly in the middle of all the numbers
C. 3rd from the right end
D. 2nd to the right of 28
E. None of these
160. If the number '40' in Step II is replaced by 47, what will it become in Step III applying the same rule as given in illustration?
A. 33
B. 30
C. 54
D. 39
E. None of these

Directions: Study the following information carefully and answer the questions given beside.
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: toy for 35276197 weight stroke
Step I: 61 toy for 352797 weight stroke
Step II: 6135 toy for 2797 weight stroke
Step III: 613527 toy for 97 weight stroke
Step IV: 61352797 toy for weight stroke
Step V: 61352797 for toy weight stroke
Step VI: 61352797 for stroke toy weight
And Step VI is the last step of the rearrangement.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

Input: 73 jam trim 2931 clear team 81
161. What will the position of ' 73 ' in step III of the given input?
A. 3rd from the left
B. 3rd from the right
C. 5th to the left
D. 2nd to the right from 'jam'
E. None of these
162. How many steps are required to complete the arrangement? (Input should not be counted)
A. 3
B. 4
C. 5
D. 6
E. None of these
163. Which will be the 4th term from the left end in step IV?
A. 81
B. Clear
C. 31
D. Jam
E. None of these
164. Had the term ' 31 ' been replaced by ' 39 ' in the given input, what will be the position of the term ' 39 ' in step I?
A. 2nd from the left end
B. 3rd from the right end
C. 4 th to the left of 29
D. Can't be determined
E. None of these
165. Which of the following statements is true?
A. 'jam' is 4 th from the left end in step I.
B. ' 81 ' is 7 th from the right end in step II.
C. ' 29 ' is 5 th from the left end in step V.
D. 'trim' is 3rd from the right end in step IV.
E. All are false

$$
\text { Set }-34
$$

Directions: When a word and number arrangement machine is given an input line of words and numbers, it rearranges them following a particular logic at each step. Below given is an illustration of the same.

Input: grief 37 myth 84 rubbish 53 constant 45 persistence 26
Step I: persistence 26 grief 37 myth 84 rubbish 53 constant 45
Step II: constant 37 persistence 26 grief myth 84 rubbish 5345
Step III: rubbish 45 constant 37 persistence 26 grief myth 8453
Step IV: myth 53 rubbish 45 constant 37 persistence 26 grief 84
Step V: grief 84 myth 53 rubbish 45 constant 37 persistence 26

Step V is the last step of the arrangement.
On the basis of above illustration find the various steps of arrangement for the input given below.

Input: label 51 rhythm 22 sabotage 82 complete 91 sufficiency 16
166. What is the position of 'sabotage' with respect to ' 91 ' in step $V$ ?
A. Second to the left
B. Immediate right
C. Second to the right
D. Third to the left
E. None of these
167. Which of the following is step IV?
A. complete 51 rhythm 22 sufficiency 16 sabotage 82 label 91
B. sabotage 82 rhythm 22 sufficiency 16 complete 51 label 91
C. sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91
D. sabotage 8251 complete rhythm 22 sufficiency 16 label 91
E. None of these
168. Which of the following comes exactly between 'complete' and 'sufficiency' in step III?
A. Both rhythm and 22
B. rhythm
C. 22
D. 51
E. All of these
169. How many words are to the left of 51 in step II?
A. 3
B. 5
C. 4
D. 2
E. None of these
170. What is the sum of the even numbers that come between 'label' and 'sufficiency' in step V?
A. 223
B. 195
C. 173
D. 104
E. 130

$$
\text { Set - } 35
$$

Directions: When a word and number arrangement machine is given an input line of words and numbers, it rearranges them following a particular logic at each step. Below given is an illustration of the same.

Input: grief 37 myth 84 rubbish 53 constant 45 persistence 26 Step I: persistence 26 grief 37 myth 84 rubbish 53 constant 45
Step II: constant 37 persistence 26 grief myth 84 rubbish 5345
Step III: rubbish 45 constant 37 persistence 26 grief myth 8453
Step IV: myth 53 rubbish 45 constant 37 persistence 26 grief 84 Step V: grief 84 myth 53 rubbish 45 constant 37 persistence 26

Step V is the last step of the arrangement.
On the basis of above illustration find the various steps of arrangement for the input given below.

Input: label 51 rhythm 22 sabotage 82 complete 91 sufficiency 16
171. What is the position of 'sabotage' with respect to ' 91 ' in step V ?
A. Second to the left
B. Immediate right
C. Second to the right
D. Third to the left
E. None of these

## 172. Which of the following is step IV?

A. complete 51 rhythm 22 sufficiency 16 sabotage 82 label 91
B. sabotage 82 rhythm 22 sufficiency 16 complete 51 label 91
C. sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91
D. sabotage 8251 complete rhythm 22 sufficiency 16 label 91
E. None of these
173. Which of the following comes exactly between 'complete' and 'sufficiency' in step III?
A. Both rhythm and 22
B. rhythm
C. 22
D. 51
E. All of these
174. How many words are to the left of 51 in step II?
A. 3
B. 5
C. 4
D. 2
E. None of these
175. What is the sum of the even numbers that come between 'label' and 'sufficiency' in step V ?
A. 223
B. 195
C. 173
D. 104
E. 130

$$
\text { Set - } 36
$$

Directions: A word and number arrangement machine when given an input line of word arranges them following a unique logic/mathematical operation at each step. The following is an illustration of the input and various steps to obtain the output.

Input : floating current boat swing stream and sail along
Step I : 1614810126810

Step II : 28201620
Step III: 84

Step IV: 4
Step IV is the final output.
Find the final output and various steps for the following input.
Input: season come and go weather remain same forever
176. Which of the following values is the third multiple of the final output?
A. 12
B. 15
C. 9
D. 6
E. None of these
177. Four of the following five are alike in a way and thus form a group. Which of the following does not belong to that group?
A. 12
B. 13
C. 14
D. 20
E. 18
178. If in the given input 'and' is replaced by 'but', then which of the following value will change?
A. 8
B. 4
C. 6
D. No change will happen
E. None of these
179. What would be the resultant if second value from right end in step $I$ is added with the second value from right end in step III?
A. 14
B. 19
C. 20
D. 15
E. None of these
180. Find the values of step II, if the value of final output is subtracted from each number of step II?
A. 29231721
B. 25231115
C. 23171115
D. 22181016
E. None of these

$$
\text { Set - } 37
$$

Directions: Study the following information carefully to answer the these questions.
A word arrangement machine, when given an input line of words, rearranges them following a particular rule in each step. The following is an illustration of input and the steps of rearrangement.

| Input |  | Go for | to | Tho |  | By S easy |  |  | To | Access |  | at |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Step I |  | Access | Go | for | to | Though |  | By | easy |  | To |  |
| Step II |  | Access | at | Go | for | to | Though |  | By | eas |  | To |
| Step III |  | Access | at | By | Go | for | $\begin{aligned} & \text { to } \\ & \text { Go } \end{aligned}$ | Though |  | easy |  | To |
| Step VI |  | Access | at | By | easy |  |  | for | to |  |  | To |
| Step V |  | Access | at | By | easy |  | $\begin{aligned} & \text { Go } \\ & \text { for } \end{aligned}$ | Go | to | Though |  | To |
| Step VI |  | Access | at | By | easy |  | for for | Go | Though |  | to | To |
| Step VII |  | Access | at | By | easy |  |  | Go | Though |  | To | to |
| And Step |  | Ast step for | is in |  |  |  |  |  |  |  |  |  |

As per the rules followed in the above steps, find out in the given questions the appropriate step for the given input.

## 181. Input : story For around on was He at

 Which of the following will be step IV for the given input?A. around at For He on was story
B. around at For He on story was
C. around at For He story on was
D. around at He For story on was
E. None of these
182. Input : every and peer to an for

Which of the following steps would be 'an and every for peer to' ?
A.II
B. III
C. IV
D. $V$
E. None of these
183. Input : Together over series on feast the so Which of the following steps will be the last but one?
A. I
B. III
C. IV
D. V
E. None of these
184. Input : Over Go For through at one Which step will be the last step of the above input?
A. III
B. V
C. VI
D. VII
E. None of these
185. Input: Over Go For through at one What will be the third word from the right end in step III of the above input?
A. for
B. go
C. over
D. through
E. one

Set-38
Directions: Read the given information carefully and answer the questions given beside:
A word and number arrangement machine when given an input line of words and numbers. rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

| Input | $:$ | goal | 63 | 57 | home | five | task | 82 | 17 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | 82 | goal | 63 | 57 | home | five | task | 17 |
| Step II | $:$ | 82 | five | goal | 63 | 57 | home | task | 17 |
| Step III | $:$ | 82 | five | 63 | goal | 57 | home | task | 17 |
| Step IV | $:$ | 82 | five | 63 | goal | 57 | home | 17 | task |

Step IV is the last output.
As per the rules followed in the above steps, find out each of the following questions the appropriate step for the given input
186. Input: host 1532 page 43 over mother 92 Which of the following step will be the last but one?
A. IV
B. $V$
C. VI
D. VII
E. None of these
187. Step II of an input is: 67 cat 1225 dog fight man 42

Which of the following will be step V?
A. 67 cat 42 dog 25 fight 12 man
B. 67 cat 42 dog 2512 fight man
C. 67 cat 42 dog 1225 fight man
D. 67 cat 421225 dog fight man
E. None of these
188. Which of the following will be step V for the above input?
Input :
world
23 new
47 major
1362 desk
A. 62 desk 47 major world 23 new 13
B. 62 desk 47 world 23 new major 13
C. 62 desk 47 major 23 world new 13
D. 62 desk 47 major 23 new world 13
E. None of these
189. How many more steps are required to complete the rearrangement?

Step III of an input is: 81 boat 73 wheel spike dancer 3259
A. Two
B. Three
C. Four
D. Five
E. None of these
190. Which of the following step is the 6th step of the input if the 3rd step is: Step III of an input is : $\mathbf{8 1}$ boat $\mathbf{7 3}$ wheel spike dancer $\mathbf{3 2 5 9}$
A. 81 boat 73 dancer wheel spike 3259
B. 81 boat 73 dancer 59 spike wheel 32
C. 81 boat 73 dancer 59 spike 32 wheel
D. 81 boat 73 dancer 59 wheel spike 32
E. None of these

$$
\text { Set - } 39
$$

Directions: Study of the following information and answer the question given below it:

A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

| Input | $:$ | quick | fire | 15 | 28 | 39 | war | 19 | yellow |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | yellow | quick | fire | 15 | 28 | 39 | war | 19 |
| Step II | $:$ | yellow | 15 | quick | fire | 28 | 39 | war | 19 |
| Step III | $:$ | yellow | 15 | war | quick | fire | 28 | 39 | 19 |
| Step IV | $:$ | yellow | 15 | war | 19 | quick | fire | 28 | 39 |
| Step V | $:$ | yellow | 15 | war | 19 | quick | 28 | fire | 39 |

And Step V is the step of the above input.
As per rules followed in the above steps, find out in each of the following questions the appropriate.
191. Step II an input is: zebra 12 bank carriage 463129 dusk Which of the following steps will be the last but one?
A. V
B. VI
c. VII
D. III
E. None of these
192. Input: age die 725335 hold goal 26 How many steps will be required to complete the rearrangement?
A. Four
B. Five
C. Six
D. Seven
E. None of these
193. Step II of an input is: win 1292 for 81 always 36 home Which of the following step will be step VII ?
A. win
12 home
3692 for 81 always
B. win 12 home 36 for 92
92 always
81
C. win 12 home 92 for 81 always 36
D. There will be no step VII
E. None of these
194. Step III of an input is: train 23 star 6132 fall hard 53 Which of the following is definnitely the input?
A. 23 star 61 train 32 fall hard 53
B. star train $6123 \quad 32$ fall hard
53
C. 61 star 23 train 32 fall hard 53
D. Can't be determined
$E$. None of these

Join us
195. Input: 36 Sky 19 Night 9055 Bear Lotus White

What is the third element from the right end in step III and second element from the left end in step $V$ respectively?
A. 55-19
B. White -19
C. Bear - white
D. Sky -90
E. 19-55

$$
\text { Set }-40
$$

Direction: Study the following information carefully and answer the questions given below.
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and various steps rearrangement. (All the numbers are two digit numbers).

| Input | $\mathbf{:}$ | $\mathbf{1 1}$ | day | $\mathbf{3 4}$ | night | $\mathbf{9 3}$ | pace | $\mathbf{2 7}$ | easy | $\mathbf{4 4}$ | joy |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Step I | $:$ | 93 | 11 | day | 34 | night | pace | 27 | easy | 44 | joy |
| Step II | $:$ | 93 | 11 | 34 | night | pace | 27 | easy | 44 | joy | day |
| Step III | $:$ | 93 | 44 | 11 | 34 | night | pace | 27 | easy | joy | day |
| Step IV | $:$ | 93 | 44 | 11 | 34 | night | pace | 27 | joy | day | easy |
| Step V | $:$ | 93 | 44 | 34 | 11 | night | pace | 27 | joy | day | easy |
| Step VI | $:$ | 93 | 44 | 34 | 11 | night | pace | 27 | day | easy | joy |
| Step VII | $:$ | 93 | 44 | 34 | 27 | 11 | night | pace | day | easy | joy |
| Step VIII | $:$ | 93 | 44 | 34 | 27 | 11 | pace | day | easy | joy | night |
| Step IX | $:$ | 93 | 44 | 34 | 27 | 11 | day | easy | joy | night | pace |

And Step IX is the last step of the rearrangement as the desired arrangement is obtained. As per rules followed in the above steps, find out in each of the questions the appropriate step for the given input.

Input for the questions:

## class 25 war 15 race 73 heap 58 just 88 take 38

196. What is the position of 'war' in the Step 'VII'?
A. Seventh from the left end
B. Eighth from the right end
D. Fifth from the right end
E. Sixth from the left end
197. Which of the following is the ninth from the right in Step VI?
A. race
B. 25
C. war
D. 58
E. 15
198. What is the position of ' 15 ' in the Step ' $I X$ '?
A. Seventh from the left end
B. Eighth from the left end
C. Fifth from the right end
D. Seventh from the right end
E. Eighth from the right end
199. How many Steps are required to complete this arrangement?
A. Eleven
B. Twelve
C. Ten
D. Nine
$E$. None of these
200. Which of the following represents the Step $X$ ?
A. 8873583825 war 15 race take class heap just
B. 887358382515 class heap just race take war
C. 887358382515 war class heap just race take
D. 887358382515 war take class heap just race
E. There is no such Step

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## CORRECT ANSWERS:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | E | A | D | C | B | E | A | D | C |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| B | D | C | C | C | C | D | C | C | D |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| B | C | A | B | D | B | C | E | A | D |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| C | A | C | D | B | D | C | A | B | C |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| B | C | B | C | D | D | B | C | A | D |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| B | C | A | B | E | B | C | C | B | D |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| C | D | A | B | C | B | C | D | A | B |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| B | C | E | A | B | B | C | E | B | B |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| E | A | B | D | C | E | B | D | C | A |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| B | C | B | A | B | D | B | E | D | A |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
| C | D | A | E | B | A | A | B | D | C |
| 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| D | C | E | B | A | A | E | B | D | C |
| 121 | 121 | 121 | 121 | 121 | 121 | 121 | 121 | 121 | 121 |
| E | A | B | D | C | C | A | D | D | A |
| 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 |
| B | D | A | C | A | C | B | D | A | D |
| 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| C | D | B | C | B | C | B | D | B | C |
| 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 |
| B | D | C | A | B | B | D | C | E | A |
| 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 |
| A | C | E | B | B | B | C | B | A | D |
| 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 |
| B | C | B | A | D | C | B | D | A | C |
| 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 |
| C | B | D | E | C | A | B | C | C | B |
| 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 |
| A | C | E | D | A | E | B | D | A | C |

## Explanations:

1. The numbers are arranged in ascending order stepwise from left to right, rearranging only one number at each step - one number from the beginning and one number from the end, alternately.

Input : $\begin{array}{lllllllll}68 & 182 & 39 & 93 & 129 & 46 & 21 & 58\end{array}$
Step I : $21 \begin{array}{llllllll} & 68 & 182 & 39 & 93 & 129 & 46 & 58\end{array}$
Step II: $21 \quad 68 \quad 39 \quad 93 \quad 129 \quad 46 \quad 58 \quad 182$
Step III: $21 \begin{array}{llllllll}21 & 39 & 68 & 93 & 129 & 46 & 58 & 182\end{array}$
Hence, Option B is correct.
2. Since the number may be rearranged in several possible ways, so it is not possible to determine any of the previous steps.

Hence, Option E is correct.
3. Clearly, the last step would be the one containing the whole set of numbers in an ascending order from left to right

Hence, Option A is correct.
4.

| Input | $:$ | 101 | 85 | 66 | 49 | 73 | 39 | 142 | 25 | 115 | 74 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | 25 | 101 | 85 | 66 | 49 | 73 | 39 | 142 | 115 | 74 |
| Step II | $:$ | 25 | 101 | 85 | 66 | 49 | 73 | 39 | 115 | 74 | 142 |
| Step III : | 25 | 39 | 101 | 85 | 66 | 49 | 73 | 115 | 74 | 142 |  |
| Step IV : | 25 | 39 | 101 | 85 | 66 | 49 | 73 | 74 | 115 | 142 |  |
| Step V | $:$ | 25 | 39 | 49 | 101 | 85 | 66 | 73 | 74 | 115 | 142 |
| Step VI : | 25 | 39 | 49 | 85 | 66 | 73 | 74 | 101 | 115 | 142 |  |
| Step VII : | 25 | 39 | 49 | 66 | 85 | 73 | 74 | 101 | 115 | 142 |  |
| Step VIII: | 25 | 39 | 49 | 66 | 73 | 74 | 85 | 101 | 115 | 142 |  |

Hence, Option D is correct.
5.

| Input : | 67 | 23 | 58 | 159 | 46 | 123 | 74 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I : | 23 | 67 | 58 | 159 | 46 | 123 | 74 |
| Step II : | 23 | 67 | 58 | 46 | 123 | 74 | 159 |
| Step III: | 23 | 46 | 67 | 58 | 123 | 74 | 159 |

Hence, Option C is correct.
6. The numbers are arranged in ascending order stepwise from left to right, rearranging only one number at each step - one number from the beginning and one number from the end, alternately.

| Input | $:$ | 68 | 182 | 39 | 93 | 129 | 46 | 21 | 58 |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :--- | :--- | :--- |
| Step I | $:$ | 21 | 68 | 182 | 39 | 93 | 129 | 46 | 58 |
| Step II | $:$ | 21 | 68 | 39 | 93 | 129 | 46 | 58 | 182 |
| Step III | $:$ | 21 | 39 | 68 | 93 | 129 | 46 | 58 | 182 |

7. Since the number may be rearranged in several possible ways, so it is not possible to determine any of the previous steps.
8. Clearly, the last step would be the one containing the whole set of numbers in an ascending order from left to right
9. 

| Input | $:$ | 101 | 85 | 66 | 49 | 73 | 39 | 142 | 25 | 115 | 74 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Step I | $:$ | 25 | 101 | 85 | 66 | 49 | 73 | 39 | 142 | 115 | 74 |
| Step II | $:$ | 25 | 101 | 85 | 66 | 49 | 73 | 39 | 115 | 74 | 142 |
| Step III | $:$ | 25 | 39 | 101 | 85 | 66 | 49 | 73 | 115 | 74 | 142 |
| Step IV | $:$ | 25 | 39 | 101 | 85 | 66 | 49 | 73 | 74 | 115 | 142 |
| Step V | $:$ | 25 | 39 | 49 | 101 | 85 | 66 | 73 | 74 | 115 | 142 |
| Step VI | $:$ | 25 | 39 | 49 | 85 | 66 | 73 | 74 | 101 | 115 | 142 |
| Step VII | $:$ | 25 | 39 | 49 | 66 | 85 | 73 | 74 | 101 | 115 | 142 |
| Step VIII | $:$ | 25 | 39 | 49 | 66 | 73 | 74 | 85 | 101 | 115 | 142 |

10. 

| Input | $:$ | 67 | 23 | 58 | 159 | 46 | 123 | 74 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | 23 | 67 | 58 | 159 | 46 | 123 | 74 |
| Step II | $:$ | 23 | 67 | 58 | 46 | 123 | 74 | 159 |
| Step III | $:$ | 23 | 46 | 67 | 58 | 123 | 74 | 159 |

## Common explanation:

After careful analysis of the given input and various steps of rearrangement, it is evident that a number is arranged along with a word in each step. As for numbers, the one the sum of the digits of which $(2+2=4)$ is the lowest is placed on the extreme left while the word with maximum number of consonants (Number of consonants in Transformation =9) is placed at the extreme right of step 1.

In the next step, the word which has the least number of consonants will come next to ' 22 ' and the number the sum of the digits of which $(5+7=12)$ is the highest will take the place immediate left to the word 'Transformation'. But as we can observe that the number '57' is already placed right before the word 'Transformation' we will make the next change in the same step and that is to place the word with second maximum number of consonants ( 8 consonants in Disadvantageous) before the number '57'.

And so on.

| Input : | Entert <br> ainme <br> nt | 25 | Thankfu <br> l | 49 | Congratula <br> tions | 32 | Ambula <br> nce | Annivers <br> ary | 63 | 38 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Step 1: | 32 | Entert <br> ainme <br> nt | 25 | Thankf <br> ul | 49 | Ambul <br> ance | Annivers <br> ary | 63 | 38 | Congrat <br> ulations |
| Step 2: | 32 | Ambul <br> ance | Entertai <br> nment | 25 | Thankful | Annive <br> rsary | 63 | 38 | 49 | Congrat <br> ulations |
| Step 3: | 32 | Ambul <br> ance | 25 | Thankf <br> ul | Anniversar <br> y | 63 | 38 | Entertai <br> nment | 49 | Congrat <br> ulations |
| Step 4: | 32 | Ambul <br> ance | 25 | Thankf <br> ul | 63 | Annive <br> rsary | 38 | Entertai <br> nment | 49 | Congrat <br> ulations |

11. It's evident from the common explanation, that 'Thankful' is Fourth from the left end.

Hence option B is correct.
12. Following the common explanation, we get that:

Third element to the right of the seventh element from the right end $=7$ th -3 rd $=4$ th element from right end in the second last step i.e. 38.
13. Following the common explanation, we get that the arrangement will be completed in the 4th step.
14. From the common explanation we can observe that third step will be the last but one.
15. From the common explanation there are five elements between 'Ambulance' and 'Entertainment' in the second last step.

## Common Explanations (16-20):

## Changes happening with words:

In the given steps words are arranged in ascending order according to the number of letters they have. In each step only one word is arranged and getting placed to the immediate right of the word previously placed.

## Changes happening in given numbers

In Step 1, both the digits of each of the numbers are made square and added to give the resultant number.
For instance, the number 05 from the Input will become in Step $1=\left(0^{2}+5^{2}\right)=25$
In Step 2, the digits of each of the numbers are getting reversed.
For instance, the number 25 in Step 2 becomes 52.
In Step 3 and Step 4 the respective pattern of Step 1 and Step 2 is getting repeated.

In Step 5, the digits of each of the numbers are getting added and then the sum is added to 5 to give the resultant number.
For instance, sum of the digits of $92=9+2=11$, then $11+5=16$
In the final step, the numbers are arranged in their descending order.

| Input: | in | believe | 13 | 09 | have | 27 | to | 23 | you | 35 | yourself |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step 1: | in | to | believe | 10 | 81 | have | 53 | 13 | you | 34 | yourself |
| Step 2: | in | to | you | believe | 01 | 18 | have | 35 | 31 | 43 | yourself |
| Step 3: | in | to | you | have | believe | 01 | 65 | 34 | 10 | 25 | yourself |
| Step 4: | in | to | you | have | believe yourself | 10 | 56 | 43 | 01 | 52 |  |
| Step 5: | in | to | you | have | believe yourself | 06 | 16 | 12 | 06 | 12 |  |
| Step 6: | in | to | you | have | believe yourself | 16 | 12 | 12 | 06 | 06 |  |

16. Following the common explanation, we get that:

Third element to the right of the sixth element from the right end $=6$ th -3 rd $=3$ th element from right end in the second last step i.e. 12.
Hence, option C is correct.
17. Following the common explanation, we get that the arrangement will be completed in the 6th step. Hence, option D is correct.
18. Following the common explanation, we get that

Sum of numbers in step $4(10+56+43+01+52)=162$.
Hence, option C is correct.
19. It's evident from the common explanation, that 'Believe' is at seventh position from the right end. Hence option C is correct.
20. From the common explanation we can observe that the step 5 will be the last but one. Hence, option D is correct.

## Common Explanations (21-25):

Final Output-
Input : vast 78 code 47 bill 29 flat 38 like 25 upper 69
Step 1: 79 bill vast code 4729 flat 38 like 25 upper 69
Step 2 : 68 code 79 bill vast 4729 flat 38 like 25 upper
Step 3 : 46 flat 68 code 79 bill vast 2938 like 25 upper
Step 4: 39 like 46 flat 68 code 79 bill vast 2925 upper
Step 5 : 28 upper 39 like 46 flat 68 code 79 bill vast 25
Step 6 : 24 vast 28 upper 39 like 46 flat 68 code 79 bill
Change in word: The words are placed at the extreme left end as they appear in the dictionary i.e. the word that appears first in the dictionary will come first to the extreme left end of the step.

Change in number: The numbers are considered as per the descending order i.e. the greatest number is chosen first and if it is an even number then 1 is added to that otherwise 1 is deducted from it and placed at the extreme left end.

The operation is performed first on words and then on numbers but within the same step.

## Reference:

Input: sell 11 keep 23 day 63 small 49 clock 58 pain 88 Step 189 clock sell 11 keep 23 day 63 small 4958 pain

## Inference:

As the greatest number here is 78 which is even so it will become 79 in step 1 and 'bill' will come first as per dictionary order, so it will be placed as follows.

Input: vast 78 code 47 bill 29 flat 38 like 25 upper 69
Step 179 bill vast code 4729 flat 38 like 25 upper 69

## Reference:

Step 189 clock sell 11 keep 23 day 63 small 4958 pain Step 262 day 89 clock sell 11 keep 23 small 4958 pain

## Inference:

As the second greatest number here is 69 which is odd so it will become 68 in step 2 and 'code' will come second as per dictionary order, so it will be placed as follows.

Step 179 bill vast code 4729 flat 38 like 25 upper 69
Step 268 code 79 bill vast 4729 flat 38 like 25 upper

## Reference:

Step 262 day 89 clock sell 11 keep 23 small 4958 pain
Step 359 keep 62 day 89 clock sell 1123 small 49 pain

## Inference:

As the third greatest number here is 47 which is odd so it will become 46 in step 3 and 'flat' will come third as per dictionary order, so it will be placed as follows.

Step 268 code 79 bill vast 4729 flat 38 like 25 upper Step 346 flat 68 code 79 bill vast 2938 like 25 upper

## Reference:

Step 359 keep 62 day 89 clock sell 1123 small 49 pain Step 448 pain 59 keep 62 day 89 clock sell 1123 small

## Inference:

As the fourth greatest number here is 38 which is even so it will become 39 in step 4 and 'like' will come fourth as per dictionary order, so it will be placed as follows.

Step 346 flat 68 code 79 bill vast 2938 like 25 upper
Step 439 like 46 flat 68 code 79 bill vast 2925 upper

## Reference:

Step 448 pain 59 keep 62 day 89 clock sell 1123 small
Step 522 sell 48 pain 59 keep 62 day 89 clock 11 small

## Inference:

As the fifth greatest number here is 29 which is odd so it will become 28 in step 5 and 'upper' will come fifth as per dictionary order, so it will be placed as follows.

Step 439 like 46 flat 68 code 79 bill vast 2925 upper
Step 528 upper 39 like 46 flat 68 code 79 bill vast 25

## Reference:

Step 522 sell 48 pain 59 keep 62 day 89 clock 11 small Step 610 small 22 sell 48 pain 59 keep 62 day 89 clock

## Inference:

As the smallest number here is 25 which is odd so it will become 24 in step 6 and 'vast' will come sixth as per dictionary order, so it will be placed as follows.

Step 528 upper 39 like 46 flat 68 code 79 bill vast 25
Step 624 vast 28 upper 39 like 46 flat 68 code 79 bill
21. From the common explanation it is clear that 68 is exactly in the middle of like and bill in step 4.
"like 46 flat 68 code 79 bill"

Hence option B is the correct answer.
22. From the common explanation it is clear that " 2938 like" is seen in the same sequence in step 3 .

Hence option C is the correct answer.
23. From the common explanation it is clear that in step 5 the eight element from right end is " 46 " and third to the left of 46 is "upper".

Hence option A is the correct answer.
24. From the common explanation it is clear that " 68 code 79 bill vast 4729 flat 38 like 25 upper" is the step 2 of final output.

Hence option B is the correct answer.
25. From the common explanation it is clear that the sum of odd numbers in step 6 is $118(39+79)$ and the sum of even numbers in the same step is $166(24+28+46+68)$

The required difference $=166-118=48$

Hence option D is the correct answer.

## Common explanation: (Q. 26 to Q. 30)

Each step is obtained by applying an operation different from the previous step.

## Reference:

Input: glory gained through resolving conflict between these personalities
Step1: 861012128614

## Inference:

Here the operation performed is: Multiplication.

Here, the conversion of letters to numbers is done by doubling the number of consonants of each word. The numbers are to be written in the same order in which their respective words are written in the input.

Following the same logic, we can easily find the values of step 1.

- For 'result' number of consonants are 4 so its respective number becomes 8 .( $4 \times 2$ )
- For 'melting', number of consonants are 5 so its respective number becomes 10 .( $5 \times 2$ )

Input: decreasing glaciers result from the melting snow valley
Step1: 12108641068

## Reference:

Step1: 861012128614
Step2: 2248

## Smartkeeda

## Inference:

Here the mathematical operation performed is: Subtraction.

- To obtain the first value of step 2, difference of first and second numbers (from left end) is taken.
- To get the second value of step 2 , difference of third and fourth numbers is taken.
- To acquire the third value of step 2, difference of fifth and sixth numbers is taken.
- To identify the fourth value of step 2, difference of seventh and eighth numbers is taken.

Following the same logic, we can easily find the values of step 2.
Step1: 12108641068
Step2: 2262

## Reference:

Step2: 2248
Step3: 24

## Inference:

Here the operation performed is: Division.
First value of step 3 is obtained by taking the division of first and third numbers from left end.
Second value of step 3 is obtained by taking the division of second and fourth numbers from left end.
Note- The greater number is divided by the smaller number.
Following the same logic, we can easily find the values of step 3.
Step2: 2262
Step3: 31

## Reference:

Step3: 24
Step4: 10

## Inference:

Here the operation performed is: Addition.
Sum of both the numbers of step 3 is taken and greater number is further added to this sum to obtain the value of step 4.
Following the same logic, the value of step 4 is $3+1=4$, greater number here is 3 , so $4+3=7$.
Step3: 31
Step4: 7

## Final Output:

Input: decreasing glaciers result from the melting snow valley
Step1: 12108641068
Step2: 2262
Step3: 31
Step4: 7
26. From the following explanation it is clear that the final output is 7 and cube of which is 343 .

Hence, option B is the correct answer.
27. From the following explanation it is clear that the numeric code for 'melting' is 10 .

28. From the following explanation it is clear that unlike other values, 16 is not among the values given in various steps of output.

Hence, option E is the correct answer.
29. From the following explanation it is clear that code for snow glaciers is 6 and 10 respectively.

Hence, option A is the correct answer.
30. From the following explanation it is clear that the sum of numbers of step 2 is $2+2+6+2=12$.
sum of numbers of step 3 is $3+1=4$.

Required difference $=12-4=8$.
Hence, option D is the correct answer.

## Common Explanations (31-35):

## Final Output-

Input: dream 25 dare 64 enjoy 18 smile 23 spread 47 joy 70
Step 147 dream 2564 enjoy 18 smile 23 spread joy 70 dare Step 2644725 enjoy 18 smile 23 spread joy 70 dare dream Step 325644718 smile 23 spread joy 70 dare dream enjoy Step 418256447 smile 23 spread 70 dare dream enjoy joy Step 52318256447 spread 70 dare dream enjoy joy smile Step 6702318256447 dare dream enjoy joy smile spread

Change in word: The words are placed at the extreme right end as they appear in the dictionary i.e. the word that appears first in the dictionary will come first to the extreme left end of the step, then comes the second word as per dictionary order to the extreme right end and so on.

Change in number: The numbers are considered as per the product of their digits. The number with the highest product is chosen first and placed at the extreme left end, then the number with the second highest product is taken and placed at extreme left end and so on.

The operation is performed first on words and then on numbers but within the same step.

## Reference:

Input: live 26 life 19 king 38 size 42 aim 67 my 71
Step 167 live 26 life 19 king 38 size 42 my 71 aim

## Inference:

As the number with the highest product here is 47 so it will come to the extreme left end in step 1 and 'dare' will come first as per dictionary order, so it will be placed at extreme right end.

Input: dream 25 dare 64 enjoy 18 smile 23 spread 47 joy 70
Step 147 dream 2564 enjoy 18 smile 23 spread joy 70 dare

## Reference:

Step 167 live 26 life 19 king 38 size 42 my 71 aim
Step 23867 live 26 life 19 size 42 my 71 aim king

## Inference:

As the number with second highest product here is 64 so it will come to the extreme left end in step 2 and 'dream' will come second as per dictionary order, so it will be placed at extreme right end.

Step 147 dream 2564 enjoy 18 smile 23 spread joy 70 dare
Step 2644725 enjoy 18 smile 23 spread joy 70 dare dream

## Reference:

Step 23867 live 26 life 19 size 42 my 71 aim king Step 3263867 live 19 size 42 my 71 aim king life

## Inference:

As the number with third highest product here is 25 so it will come to the extreme left end in step 3 and 'enjoy' will come fourth as per dictionary order, so it will be placed at extreme right end.

Step 2644725 enjoy 18 smile 23 spread joy 70 dare dream
Step 325644718 smile 23 spread joy 70 dare dream enjoy

## Reference:

Step 3263867 live 19 size 42 my 71 aim king life
Step 419263867 size 42 my 71 aim king life live

## Inference:

As the number with fourth highest product here is 18 so it will come to the extreme left end in step 4 and 'joy' will come fourth as per dictionary order, so it will be placed at extreme right end.

Step 325644718 smile 23 spread joy 70 dare dream enjoy
Step 418256447 smile 23 spread 70 dare dream enjoy joy

## Reference:

Step 419263867 size 42 my 71 aim king life live Step 54219263867 size 71 aim king life live my

## Inference:

As the number with fifth highest product here is 23 so it will come to the extreme left end in step 5 and 'smile' will come fifth as per dictionary order, so it will be placed at extreme right end.

Step 418256447 smile 23 spread 70 dare dream enjoy joy
Step 52318256447 spread 70 dare dream enjoy joy smile

## Reference:

Step 54219263867 size 71 aim king life live my
Step 6714219263867 aim king life live my size

## Inference:

As the number with the least product here is 70 so it will come to the extreme left end in step 6 and 'spread' will come sixth as per dictionary order, so it will be placed at extreme right end.

Step 52318256447 spread 70 dare dream enjoy joy smile
Step 6702318256447 dare dream enjoy joy smile spread
31. From the common explanation it is clear that 18 is second to the left of fourth to the right of ' 64 ' in step 1.

Step 147 dream 2564 enjoy 18 smile 23 spread joy 70 dare
Hence option C is the correct answer.
32. From the common explanation it is clear that 64 is third to the left of fifth element from the right end in step 6.
Step 6702318256447 dare dream enjoy joy smile spread
Hence option A is the correct answer.
33. From the following explanation it is clear that the given step is step 3 of the input.

Hence option C is correct.
34. From the common explanation it is clear that "spread 70 dare" is seen for the first time in the same sequence in step 4.

Step 418256447 smile 23 spread 70 dare dream enjoy joy

Hence option D is the correct answer.
35. From the following explanation it is clear that dare is exactly between ' 47 ' and 'joy' in step 5 .

Step 52318256447 spread 70 dare dream enjoy joy smile

Hence option B is correct.

## Common Explanations (36-40):

The given output is obtained by following the below mentioned logic.

Change in Word- The words are arranged to the left most end of each step on the basis of number of vowels in the word. The word having highest number of vowels is considered first for the rearrangement. If more than one word is having same number of vowels, then the preference will be given to the word that comes first as per the dictionary order.

Change in Number- The number is placed in lowest to highest order after the word at extreme left end. First the lowest number is placed then the second highest and then so on.

Note- Changes in word and number takes place simultaneously at each step. Numbers are placed immediately after the word.

## Reference:

Input : tension 26 releases 18 because 71 you 5 watch movies 6124
Step 1: because 5 tension 26 releases 1871 you watch movies 6124

| $\mathbf{S .}$ | Word | No. of <br> Nowels | Order of <br> preference |
| :--- | :--- | :--- | :--- |
| 1 | tension | 3 | 4th |
| 2 | releases | 4 | 2nd |
| 3 | because | 4 | 1st |
| 4 | you | 2 | 5 th |
| 5 | watch | 1 | 6th |
| 6 | movies | 3 | 3 rd |

## Inference:

On the basis of our reference and logic following tables shows the order of preference of words and numbers are arranged as per ascending order i.e. lowest to highest.

| S. <br> No. | Word | No. of <br> vowels | Order of <br> preference |
| :--- | :--- | :--- | :--- |
| 1 | calcium | 3 | 1st |
| 2 | makes | 2 | 3 rd |
| 3 | body | 1 | 5 th |
| 4 | more | 2 | 4 th |
| 5 | strong | 1 | 6 th |
| 6 | glowing | 2 | 2nd |

Input : calcium 47 makes 56 body 70 more 21 strong glowing 9210
Step 1 :calcium 1047 makes 56 body 70 more 21 strong glowing 92

## Reference:

Step 1: because 5 tension 26 releases 1871 you watch movies 6124
Step 2: releases 18 because 5 tension 2671 you watch movies 6124

## Inference:

As per the above mentioned logic, arrangement looks like as followsStep 1 : calcium 1047 makes 56 body 70 more 21 strong glowing 92 Step 2 : glowing 21 calcium 1047 makes 56 body 70 more strong 92

## Reference:

Step 2: releases 18 because 5 tension 2671 you watch movies 6124 Step 3: movies 24 releases 18 because 5 tension 2671 you watch 61

## Inference:

As per the above mentioned logic, arrangement looks like as follows-
Step 2 : glowing 21 calcium 1047 makes 56 body 70 more strong 92 Step 3 : makes 47 glowing 21 calcium 1056 body 70 more strong 92

## Reference:

Step 3: movies 24 releases 18 because 5 tension 2671 you watch 61
Step 4: tension 26 movies 24 releases 18 because 571 you watch 61

## Inference:

As per the above mentioned logic, arrangement looks like as follows-

Step 3 : makes 47 glowing 21 calcium 1056 body 70 more strong 92
Step 4 : more 56 makes 47 glowing 21 calcium 10 body 70 strong 92

## Reference:

Step 4: tension 26 movies 24 releases 18 because 571 you watch 61 Step 5: you 61 tension 26 movies 24 releases 18 because 571 watch

## Inference:

As per the above mentioned logic, arrangement looks like as followsStep 4 :more 56 makes 47 glowing 21 calcium 10 body 70 strong 92 Step 5 :body 70 more 56 makes 47 glowing 21 calcium 10 strong 92

## Reference:

Step 5: you 61 tension 26 movies 24 releases 18 because 571 watch Step 6: watch 71 you 61 tension 26 movies 24 releases 18 because 5

## Inference:

As per the above mentioned logic, arrangement looks like as followsStep 5 :body 70 more 56 makes 47 glowing 21 calcium 10 strong 92
Step 6: strong 92 body 70 more 56 makes 47 glowing 21 calcium 10
36. From the following explanation we get to know that the numbers between 'glowing' and 'makes' in step 2 are 21,10 and 47.

Required average $=(21+10+47) / 3=26$.
Step 2 : glowing 21 calcium 1047 makes 56 body 70 more strong 92
Hence option D is the correct answer.
37. From the following explanation we get to know that "makes 47 glowing 21 calcium 1056 body 70 more strong 92" is step 3.

Step 3 :makes 47 glowing 21 calcium 1056 body 70 more strong 92
Hence option C is the correct answer.
38. From the following explanation we get to know that in step 6 , the number sixth from the left end is 56 and third from the right end is 21.

Required sum $=56+21=77$
Hence option A is the correct answer.
39. From the following explanation we get to know that in step 3 "body" is third to the right of fifth to the left of 'more'.

Step 3 :makes 47 glowing 21 calcium 1056 body 70 more strong 92

Hence option B is the correct answer.
40. From the following explanation we get to know that in step 4 " 56 makes 47 " is seen in the same sequence for the first time.

Step 4 :more 56 makes 47 glowing 21 calcium 10 body 70 strong 92

Hence option C is the correct answer.

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## Common explanation : (Q. 41 to Q. 45)

## Change happening from Input to Step 1:

## Reference:

Input: 62973874551286456822
Step 1: 13629738745586456823

## Inference:

In every step, two numbers are changing their positions. In input, the lowest number which is 15 , is first added by 1 and getting placed at extreme left end. Similarly, the second lowest number among all, which is 22 is also getting increased by 1 and is getting placed at the extreme right end of the input to give us Step 1.

Given Input: 88592894377515647148
Step1: $\quad 16885994377564714829$

## Reference

Step 1: 13629738745586456823
Step 2: 39136297745586682346

## Inference:

In this step too, the 3rd lowest number among all is first getting increased by 1 and is placed at the extreme left end of Step 1 and so is the case with the 4th lowest number.

Step1: 16885994377564714829
Step2: 38168859947564712949

And the same process continues till we get all the numbers arranged in similar fashion.
The complete Machine process is as follows:
Input: 88592894377515647148
Step1: 16885994377564714829
Step2: 38168859947564712949
Step3: 60381688947571294965
Step4: 72603816889429496576
Step5: 89726038162949657695
41. From the following explanation we get to know that 38 is fifth to the left of 49 in step 4 .

Step 4: 72603816889429496576
Hence option B is the correct answer.
42. From the following explanation we get to know that more than four numbers are between the one which is 3 rd from the right end and 38 in step 3.

Step 3: 60381688947571294965

Hence, option C is correct.
43. Clearly, there are two numbers between ' 16 ' which is 4 th to the left of 76 and 72 in step 5 .

Step 5: 89726038162949657695
Hence, option B is correct.
44. 2nd last step: Step4: 72603816889429496576

Evidently, 88 is on the 6th position from the right end in 2nd last step.

Hence, option C is correct.
45. Step 5: 89726038162949657695

Clearly, '49' is the number which is 7 th from the left end in Step 5 of the machine output process.
Hence, option D is correct.

## Common Explanations (46-50):

## Reference:

Input: nature create nothing useless without purpose

Step I: aceert aenrtu eelsssu eopprsu ghinnot hiottuw

## Inference:

In the Step I, firstly the letters within each word are arranged in alphabetical order on the left of each word of given Input after that the words thus formed are arranged according to dictionary from left to right.

## For example:

The word 'imagine' after arranging the letters in alphabetical order becomes 'aegiimn'.
Using the same rule Step I of the given Input can be written as:

Input: imagine yourself trapped inside hellish nightmare
Step I: adepprt aeghimnrt aegiimn deiins eflorsuy ehhills

## Reference:

Step II: 454131272411

## Inference:

In the Step II, the numeric position in alphabetic series of each vowel within each word in Step I is added and the numbers thus formed are arranged in decreasing order from left to right.

## For example:

The vowels in word 'adepprt' are ' $a$ ' and ' $e$ ' and numeric position of ' $a$ ' and ' $e$ ' in alphabetic is ' 1 ' and ' 5 ' respectively so the number is $1+5=6$.
Using the same rule Step II of the given Input can be written as:
Step II: 41242315146

## Reference:

Step III: 8826

## Inference:

In the Step III, the difference of first and second number, third and fourth number, and fifth and six number from left end in Step II is taken and 2 is multiplied to each value that obtained.

## For example:

First and second numbers from left end is Step II are ' 41 ' and ' 24 ' respectively so the difference of ' $41^{\prime}$ and ' 24 ' is 17 and when 17 is multiplied by 2 we get 34 . So the number is 34 .

Using the same rule Step III of the given Input can be written as:
Step III: 341616

## Reference:

Step IV: 1652

## Inference:

The first and second numbers from left end in Step III is added then subtracted and the values thus obtained are added to form the first number from left end in step IV. And the pattern is repeated with send and third number from left end in step III to form the second number from left end in step IV.

## For example:

First and second numbers from left end is Step III are ' 34 ' and ' 16 ' respectively. The difference of ' 34 ' and ' 16 ' is 18 and the sum of the ' 34 ' and ' 16 ' is 50 , while the sum of 18 and 50 is 68 . So the number is 68 .

Using the same rule Step IV of the given Input can be written as:
Step IV: 6832

## Reference:

Step V: 16

## Inference:

In the Step V, the digits within each number of Step IV are multiplied and the numbers thus formed are added to form a single number.

## For example:

After multiplying the digits of the number $68(6 \times 8)$ we get 48 and the digits of the number $32(3 \times 2)$ we get 6 . The sum of 48 and 6 is 54 . So the number is 54 .

Using the same rule Step V of the given Input can be written as:
Step V: 54
As it is given that Step V is the last step of the arrangement so the given input is completed.
46. Following the final solution we can say that 54 will be obtained in final step of the arrangement. Hence, the correct answer is option D.
47. Following the final solution we can say that 'aeghinmrt' will not be in step I of the given arrangement. Hence, the correct answer is option B.
48. Following the final solution, we can say the values that obtained in step III are 34,16 and 16 .

Required Sum $=34+16+16=66$
Hence, the correct answer is option C.
49. Following the final solution, we can say that 15 represents 'nightmare' in step II.

Hence, the correct answer is option A.
50. Following the final solution we can say that two prime numbers (41 and 23) are obtained in step II.

Hence, the correct answer is option D.

## Common explanation : (Q. 51 to Q.55)

Change in Number: Change in numbers take place as per the ascending order of the difference of the digits of each number. The number whose difference of digits is the smallest is taken first for rearrangement and shifted at extreme left end.

Change in Word: Change in words take place as per the reverse alphabetical order. The word whose first letter comes last as per the English alphabetical series is taken first for rearrangement and shifted at the extreme right end.

Note: Changes in word and number take place simultaneously in each step.

## The given pattern:

Input: hard 27 nut 14 impossible 54 to 86 crack 62

Step1:54 hard 27 nut 14 impossible 86 crack 62 to
Step2:86 54 hard 2714 impossible crack 62 to nut

Step3:14 8654 hard 27 crack 62 to nut impossible

Step4:62 14865427 crack to nut impossible hard
Step5:27 62148654 to nut impossible hard crack

## Solution to the given input:

Input: deeds 39 for 96 humanity 75 give 27 pleasure 62

Step1:75 deeds 39 for 96 humanity give 2762 pleasure
Step2:96 75 deeds 39 for give 2762 pleasure humanity

Step3:62 9675 deeds 39 for 27 pleasure humanity give
Step4:27 629675 deeds 39 pleasure humanity give for
Step5:39 27629675 pleasure humanity give for deeds

## Final Output:

Input: deeds 39 for 96 humanity 75 give 27 pleasure 62

Step1:75 deeds 39 for 96 humanity give 2762 pleasure

Step2:96 75 deeds 39 for give 2762 pleasure humanity

Step3:62 9675 deeds 39 for 27 pleasure humanity give
Step4:27 629675 deeds 39 pleasure humanity give for

Step5:39 27629675 pleasure humanity give for deeds
51. From the following output it is clear that 75 is third to the left of fifth element from right end in step 3.

Hence option B is correct.
52. From the following output it is clear that "96-deeds" is the only pair where both the words are never seen adjacent in any of the steps.
for -27: adjacent in step 3
39-pleasure: adjacent in step 4
pleasure-75: adjacent in step 5.
pleasure-27: adjacent in step 3.

Hence option C is correct.
53. From the following output it is clear that 96 is seen exactly between 62 and 75 for the first time in step 1.

Step1:75 deeds 39 for 96 humanity give 2762 pleasure

Hence option A is correct.
54. From the following output it is clear that humanity is second to the right of 39 in step 4.

Hence option B is correct.
55. From the following output it is clear that the sum of digits of the numbers which are second from the left end (96) and fourth from the right end (27) in step 3 are $9+6+2+7=24$.

Hence option E is correct.

## Common Explanations (56-60):

Change in Number: Change in numbers take place as per the ascending order. If the number is odd then subtract 2 from it and shift it to the extreme left end. If number is even then add 2 to it and shift it to the extreme left end.

Change in Word: Change in words take place as per the ascending order of the number of vowels in each word. Words are shifted to the extreme right end.

Note: Changes in word and number take place simultaneously in each step.

## The given pattern:

Input: developer 76 carpenter 53 duster 61 per 24 storekeeper 38

Step1: 26 developer 76 carpenter 53 duster 61 storekeeper 38 per

Step2: 4026 developer 76 carpenter 5361 storekeeper per duster

Step3: 514026 developer 7661 storekeeper per duster carpenter
Step4: 5951402676 storekeeper per duster carpenter developer

Step5: 7859514026 per duster carpenter developer storekeeper

## Solution to the given input:

Input: flip 64 championship 37 internship 29 philip 71 companionship 55

Step1: 2764 championship 37 internship philip 71 companionship 55 flip
Step2: 352764 championship internship 71 companionship 55 flip philip
Step3: 53352764 championship 71 companionship flip philip internship
Step4: 6653352771 companionship flip philip internship championship
Step5: 6966533527 flip philip internship championship companionship
56. From the following output it is clear that 'internship 71' is seen in the same sequence for the first time in step 2.

Step2: 352764 championship internship 71 companionship 55 flip philip Hence option B is correct.
57. From the following output it is clear that there are 5 words to the right of 27 in step 4.

Step4: 6653352771 companionship flip philip internship championship Hence option C is correct.
58. From the following output it is clear that the highest number in step 3 is 71 and the lowest number in step 3 is 27 .

Required difference $=44$.
Step3: 53352764 championship 71 companionship flip philip internship Hence option C is correct.
59. From the following output it is clear that 35 is fourth to the left of 'internship' in step 5.

Step5: 6966533527 flip philip internship championship companionship Hence option B is correct.
60. From the following output it is clear that 'companionship, 71 and 55 ' are between 'internship' and 'flip'.

Step2: 352764 championship internship 71 companionship 55 flip philip Hence option D is correct.

## Common explanation : (61-65)

The given output is obtained by following the below mentioned logic:
Change in Word: Words are selected on the basis of decreasing order of number of vowels within a word i.e. The word with highest number of vowels is considered first, if there are more than one word with same number of vowels then preference is given to the word that comes first as per dictionary order. Words are placed at the left end.

Change in Number: Numbers are selected on the basis of descending order. If the number is an even number then change it by adding 2 to it and shift to the extreme left end. If the number is an odd number then change it by subtracting 2 from it and shift it to the extreme left end.

Note: Changes in word and number take place simultaneously at each step.

## Reference:

Input :fire 76 for 53 fauna 14 favour 27 freedom 36
Step1:78 fauna fire for 5314 favour 27 freedom 36

| S.No. | Word | No. of <br> vowels | Order of <br> Preference | Number | Changed <br> Number | Order of <br> Preference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | fire | 2 | $4^{\text {th }}$ | $76-$ Even | 78 | $2^{\text {nd }}$ |
| 2 | for | 1 | $5^{\text {th }}$ | $53-$ Odd | 51 | $1^{\text {st }}$ |
| 3 | fauna | 3 | $1^{\text {st }}$ | $14-$ Even | 16 | $3^{\text {rd }}$ |
| 4 | favour | 3 | $2^{\text {nd }}$ | $27-$ Odd | 25 | $5^{\text {th }}$ |
| 5 | freedom | 3 | $3^{\text {rd }}$ | $36-$ Even | 38 | $4^{\text {th }}$ |

## Inference:

On the basis of given logic following table is prepared which shows the changes in numbers and words and their order of preference in which they are to be rearranged.

| S.No. | Word | No. of <br> vowels | Order of <br> Preference | Number | Changed <br> Number | Order of <br> Preference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | prison | 2 | $3^{\text {rd }}$ | $24-$ Even | 26 | $4^{\text {th }}$ |
| 2 | pirates | 3 | $2^{\text {nd }}$ | $61-$ Odd | 59 | $2^{\text {nd }}$ |
| 3 | proxy | 1 | $5^{\text {th }}$ | $70-$ Even | 72 | $1^{\text {st }}$ |
| 4 | prone | 2 | $4^{\text {th }}$ | $53-$ Odd | 51 | $3^{\text {rd }}$ |
| 5 | prejudice | 4 | $1^{\text {st }}$ | $17-$ Odd | 15 | $5^{\text {th }}$ |

Input: prison 24 pirates 61 proxy 70 prone 53 prejudice 17
Step1:72 prejudice prison 24 pirates 61 proxy prone 5317

## Reference:

Step1:78 fauna fire for 5314 favour 27 freedom 36
Step2:51 favour 78 fauna fire for 1427 freedom 36

## Inference:

Step1:72 prejudice prison 24 pirates 61 proxy prone 5317
Step2:59 pirates 72 prejudice prison 24 proxy prone 5317

## Reference:

Step2:51 favour 78 fauna fire for 1427 freedom 36
Step3:38 freedom 51 favour 78 fauna fire for 1427

## Inference:

Step2:59 pirates 72 prejudice prison 24 proxy prone 5317
Step3:51 prison 59 pirates 72 prejudice 24 proxy prone 17

## Reference:

Step3:38 freedom 51 favour 78 fauna fire for 1427
Step4:25 fire 38 freedom 51 favour 78 fauna for 14

## Inference:

Step3:51 prison 59 pirates 72 prejudice 24 proxy prone 17
Step4:26 prone 51 prison 59 pirates 72 prejudice proxy 17
Reference:

Step4:25 fire 38 freedom 51 favour 78 fauna for 14
Step5:16 for 25 fire 38 freedom 51 favour 78 fauna

## Inference:

Step4:26 prone 51 prison 29 pirates 72 prejudice proxy 17 Step5:15 proxy 26 prone 51 prison 59 pirates 72 prejudice

## Final Output:

Input: prison 24 pirates 61 proxy 70 prone 53 prejudice 17 Step1:72 prejudice prison 24 pirates 61 proxy prone 5317 Step2:59 pirates 72 prejudice prison 24 proxy prone 5317 Step3:51 prison 59 pirates 72 prejudice 24 proxy prone 17 Step4:26 prone 51 prison 59 pirates 72 prejudice proxy 17 Step5:15 proxy 26 prone 51 prison 59 pirates 72 prejudice
61. The step 3 of the given input is -51 prison 59 pirates 72 prejudice 24 proxy prone 17 Option C, is hence the correct answer.
62. From the following explanation it is clear that ' 61 ' is third to the right of third from the left end in step 1.

Option D, is hence the correct answer.
63. From the following explanation it is clear that 'prison' comes exactly between prone and pirates in step 4.

Option A, is hence the correct answer.
64. From the following explanation it is clear that 'prison 59 pirates' is seen in step 3 for the first time.

Option B, is hence the correct answer.
65. From the following explanation it is clear that in step 2 , the difference of the sum of prime numbers and sum of even numbers is 33 .

Option C, is hence the correct answer.

## Common explanation : (Q. 66 to Q.70)

Change in Number: Change in numbers take place as per the ascending order of the sum of the digits of each number.

Change in Word: Change in words take place in descending order of number of consonants in each word.

Note: Changes in word and number take place in alternate steps starting with number first. If in a step, a number is already at the desired place then for that particular step operation will be performed on word and vice-versa.

## The given pattern:

Input: fruit 29 frozen 71 vegetable 46 cultivation 39 fertilizers 52
Step I: 52 fruit 29 frozen 71 vegetable 46 cultivation 39 fertilizers
Step II: 52 fertilizers fruit 29 frozen 71 vegetable 46 cultivation 39
Step III: 52 fertilizers 71 fruit 29 frozen vegetable 46 cultivation 39
Step IV: 52 fertilizers 71 cultivation fruit 29 frozen vegetable 4639
Step V: 52 fertilizers 71 cultivation 46 fruit 29 frozen vegetable 39
Step VI:52 fertilizers 71 cultivation 46 vegetable fruit 29 frozen 39
Step VII:52 fertilizers 71 cultivation 46 vegetable 29 fruit frozen 39
Step VIII: 52 fertilizers 71 cultivation 46 vegetable 29 frozen fruit 39
Step IX: 52 fertilizers 71 cultivation 46 vegetable 29 frozen 39 fruit

Table showing change in the given pattern:

| Change in Word |  |  | Change in Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Word | No. of <br> consonants | Order of <br> Preference | Number | Sum of <br> digits | Order of <br> Preference |
| fruit | 3 | $5^{\text {th }}$ | 29 | 11 | $4^{\text {th }}$ |
| frozen | 4 | $4^{\text {th }}$ | 71 | 8 | $2^{\text {nd }}$ |
| vegetable | 5 | $3^{\text {rd }}$ | 46 | 10 | $3^{\text {rd }}$ |
| cultivation | 6 | $2^{\text {nd }}$ | 39 | 12 | $5^{\text {th }}$ |
| fertilizers | 7 | $1^{\text {st }}$ | 52 | 7 | $1^{\text {st }}$ |

Output for the asked input:
Input: roam 12 countries 37 travelling 59 across 63 globe 94
Step I:12 roam countries 37 travelling 59 across 63 globe 94
Step II:12 travelling roam countries 3759 across 63 globe 94
Step III:12 travelling 63 roam countries 3759 across globe 94
Step IV:12 travelling 63 countries roam 3759 across globe 94
Step V: 12 travelling 63 countries 37 roam 59 across globe 94
Step VI: 12 travelling 63 countries 37 across roam 59 globe 94
Step VII: 12 travelling 63 countries 37 across 94 roam 59 globe
Step VIII: 12 travelling 63 countries 37 across 94 globe roam 59
Step IX: 12 travelling 63 countries 37 across 94 globe 59 roam

Table showing change in the asked input:

| Change in Word |  |  | Change in Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Word | No. of <br> consonants | Order of <br> Preference | Number | Sum of <br> digits | Order of <br> Preference |
| roam | 2 | $5^{\text {th }}$ | 12 | 3 | $1^{\text {st }}$ |
| countries | 5 | $2^{\text {nd }}$ | 37 | 10 | $3^{\text {rd }}$ |
| travelling | 7 | $1^{\text {st }}$ | 59 | 14 | $5^{\text {th }}$ |
| across | 4 | $3^{\text {rd }}$ | 63 | 9 | $2^{\text {nd }}$ |
| globe | 3 | $4^{\text {th }}$ | 94 | 13 | $4^{\text {th }}$ |

66. After completion of step III, only 6 steps are needed to reach the final output i.e. Step IX.

Hence option B is correct.
67. From the following output it is clear that 37 is fourth to the right of second element from left end in step III.

Hence option C is correct.
68. From the following output it is clear that "countries roam 37 " is the only sequence which is unique i.e. not repeated in any other step.

Hence option D is correct.
69. From the following explanation it is clear that there are three words between the second element from right end and third element from left end in step VIII.

Hence option A is correct.
70. From the following explanation it is clear that ' 63 ' is third to the left of across in the final output.

Hence option B is correct.

## Common Explanations (71-75):

Each step is obtained by applying an operation different from the previous step.

## Reference:

Input: shady sun made weather pleasent to roam around
Step1: 8661010468

## Inference:

Here the operation performed is: Addition.
Here, the conversion of letters to numbers is done by performing addition of certain numbers to the number of letters of each word. The numbers are to be written in the same order in which their respective words are written in the input.

Following the same logic, we can easily find the values of step 1.

- For 'your' number of letters are 4 so its respective number becomes $4+2=6$.
- For 'early', number of letters are 5 so its respective number becomes $5+3=8$.

Input: early to bed keeps your mind fit robust
Step1: 84686668

## Reference:

Step1: 8661010468
Step2: 48604048


## Inference:

Here the mathematical operation performed is: Multiplication.

- To obtain the first value of step 2, product of first and second numbers (from left end) is taken.
- To get the second value of step 2, product of third and fourth numbers is taken.
- To acquire the third value of step 2, product of fifth and sixth numbers is taken.
- To identify the fourth value of step 2 , product of seventh and eighth numbers is taken.

Following the same logic, we can easily find the values of step 2.
Step1: 84686668
Step2: 32483648

## Reference:

Step2: 48604048
Step3: 128

## Inference:

Here the operation performed is: Subtraction.
First value of step 3 is obtained by taking the difference of first and second numbers from left end. Second value of step 3 is obtained by taking the difference of third and fourth numbers from left end. Following the same logic, we can easily find the values of step 3.

Step2: 32483648
Step3: 1612

## Reference:

Step3: 128
Step4: 10

## Inference:

Here the operation performed is: Average.
Average of both the numbers of step 3 is taken to obtain the value of step 4.
Following the same logic, the value of step 4 is $(16+12) / 2=14$
Step3: 1612
Step4: 14
71. From the following explanation it is clear that the final output is 14 and sum of its digits is 5 .

Hence, option B is the correct answer.
72. From the following explanation it is clear that the sum of numbers greater than 7 in step 1 are $=8+8+$ 8 => 24

Sum of the numbers less than $7=4+6+6+6+6 \Rightarrow 28$
Required difference $=28-24 \Rightarrow 4$
Hence, option C is the correct answer.
73. From the following explanation it is clear that in the pair " $42-14$ " 42 is not among the given values, thus is the odd one out.

In rest of the options both the numbers of the pair are among the values of different steps of output.
Hence, option E is the correct answer.
74. From the following explanation it is clear that the sum of the digits of step 3 are $1+6+1+2=10$

Square of $10=100$.
Hence, option A is the correct answer.
75. From the following explanation it is clear that sum of the second number from right end and second number from left end is $48+36=84$

Hence, option B is the correct answer.

## Common explanation : (Q. 76 to Q. 80)

## Reference:

Input: 88256856588394
Step I: 88682556588394
Step II: 88689425565883
Step III: 88689458255683
Step IV: 88689458832556
Step V: 88689458835625

Step V is the last step of the arrangement.

## Inference:

Here, the numbers are arranged as the number whose sum of the digits is highest is arranged on the extreme left in the Step I after that the number whose sum of the digits is second highest is arranged the right of the number arranged in step I.

| Number | Digits Sum |
| :---: | :---: |
| 88 | 16 |
| 68 | 14 |
| 94 | 13 |
| 58 | 13 |
| 83 | 11 |
| 56 | 11 |
| 25 | 7 |

As the digits sum of both ' 94 ' and ' 58 ' is same, then the highest number i.e. 94 will be arranged first. Similarly, the digits sum of both ' 83 ' and ' 56 ' is same, then the highest number i.e. 83 will be arranged first.

| Number | Arrangement Step |
| :---: | :---: |
| 88 | Step I |
| 68 | Step II |
| 94 | Step III |
| 58 | Step IV |
| 83 | Step V |
| 56 | Step VI |
| 25 | Step VII |

As the arrangement of the numbers follows the left to right pattern therefore it might be possible that some numbers are arranged automatically.
76. Following the common explanation, we can say that step III of the given input will be:

Input: 873754984629

Step III: 988729463754

Hence, the correct answer is option B.
77. Following the common explanation, we can say that IV steps will be required to complete the arrangement.

Input: 38712693374454

Step IV: 93383754714426

Hence, the correct answer is option C.
78. Following the common explanation, we can say we cannot find the input step for the arrangement whose step IV is '75 49634553162641 '.

Hence, the correct answer is option E.
79. Following common explanation, we get

India secured second position in the race.

Option A, is hence the correct answer.
80. Following the common explanation, we can say that ' 768429559072 ' is step IV of the given input.

Input: 824956779537
Step IV: 957749568237
Hence, the correct answer is option B.

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## Common Explanations (81-85):

Each step is obtained by applying an operation different from the previous step.

## Reference:

Input: spread joy laughter by sharing smile with masses
Step1: 921156479

## Inference:

Here the operation performed is: Addition.
Here, the conversion of letters to numbers is done by performing addition of certain numbers to the number of letters of each word. The numbers are to be written in the same order in which their respective words are written in the input. If the number of letters are even then add 3 to the number of letters, if the number of letters are odd then less 1 from the number of letters.

Following the same logic, we can easily find the values of step 1.

- For 'good' number of letters are 4 so its respective number becomes $4+3=7$.
- For 'being', number of letters are 5 so its respective number becomes 5-1=4.

Input: being good to everyone sometimes invite sad trouble
Step1: 475118926

## Reference:

Step1: 921156479
Step2: 99104236

## Inference:

Here the mathematical operation performed is: Multiplication.

- To obtain the first value of step 2, product of first and third numbers (from left end) is taken.
- To get the second value of step 2, product of second and fourth numbers is taken.
- To acquire the third value of step 2, product of fifth and seventh numbers is taken.
- To identify the fourth value of step 2, product of sixth and eighth numbers is taken.

Following the same logic, we can easily find the values of step 2.
Step1: 475118926
Step2: 20771654

## Reference:

Step2: 99104236
Step3: 5726

## Inference:

Here the operation performed is: Subtraction.
First value of step 3 is obtained by taking the difference of first and third numbers from left end.
Second value of step 3 is obtained by taking the difference of second and fourth numbers from left end. Following the same logic, we can easily find the values of step 3.

Step2: 20771654
Step3: 423

## Reference:

Step3: 5726
Step4: 5

## Inference:

Here the operation performed is : Average.
Average of all the digits of step 3 is taken to obtain the value of step 4.
Following the same logic, the value of step 4 is $(4+2+3) / 3=3$
Step3: 423
Step4: 3
81. From the following explanation it is clear that if 3 is added to one of the digits of step 3 , the final output will become 4 i.e. will be increased by 1.

Hence, option E is the correct answer.
82. From the following explanation it is clear that sum of the numbers of step 3 is $27(23+4)$, square of which is 729 .

Hence, option A is the correct answer.
83. From the following explanation it is clear that if 'sad' is replaced by "so" then second last value(From left end) of step 1 will become 5 and second last value(From left end) of step 2 will become 40 by replacing 16.

Hence, option B is the correct answer.
84. From the following explanation it is clear that ' 3 ' is the only number that belongs to one of the steps of the given output, whereas all other numbers are not from the given steps of output.

Hence, option D is the correct answer.
85. From the following explanation it is clear that the sum of even numbers in step 2 is $90(20+16+54)$ and sum of odd numbers in step 3 is 23 .

Required difference $=90-23=>67$.
Hence, option C is the correct answer.

## Common Explanations (86-90):

Change in Word: Change in words takes place as per the dictionary order and placed at the right end just before the number.

Change in Number: Change in numbers takes place as per the ascending order. Thereafter numbers are changed to a new number which is obtained by application of the following rules and then shifted to the extreme right end.

Rule I: If the number is even, then place ' 2 ' at the end of the number.
Rule II: If the number is odd, then place ' 3 ' at the beginning of the number.
Note: Changes in word and number take place simultaneously in each step.
The given pattern:
Input: name 72 nest 24 near 35 nostalgic 43 narrow 67
Step1: 72 nest near 35 nostalgic 43 narrow 67 name 242
Step2: 72 nest near nostalgic 4367 name 242 narrow 335
Step3: 72 nest nostalgic 67 name 242 narrow 335 near 343
Step4: 72 nostalgic name 242 narrow 335 near 343 nest 367
Step5: name 242 narrow 335 near 343 nest 367 nostalgic 722
Solution to the given input:
Input: team 55 taboo 48 tackle 83 tissue 69 test 11
Step1: team 5548 tackle 83 tissue 69 test taboo 311
Step2: team 5583 tissue 69 test taboo 311 tackle 482
Step3: 83 tissue 69 test taboo 311 tackle 482 team 355
Step4: 83 tissue taboo 311 tackle 482 team 355 test 369
Step5: taboo 311 tackle 482 team 355 test 369 tissue 383
86. From the following output it is clear that 'taboo' is third from left in "Input" as well as in "step 4."

Hence option E is correct.

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87. From the following output it is clear that "taboo 311 tackle 482 team 355 test 369 tissue 383 " is the final output.

Step 5: taboo 311 tackle 482 team 355 test 369 tissue 383
Hence option B is correct.
88. From the following output it is clear that the difference between the highest and the lowest numbers of step 3 is 413.

Step3: 83 tissue 69 test taboo 311 tackle 482 team 355
Hence option D is correct.
89. From the following output it is clear that ' 69 ' is second to the left of fourth element from right end in step 2.

Step2: team 5583 tissue 69 test taboo 311 tackle 482
Hence option C is correct.
90. From the following output it is clear that ' 83 tissue taboo' is seen in the same sequence in step 4.

Hence option A is correct.

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## Common Explanations (91-95):

Change in Number: Change in numbers take place as per the ascending order of the sum of the digits of each number. The number whose sum of digits is smallest is placed at extreme left end followed by the number whose sum of digits is second smallest and so on.

Change in Word: Change in words take place in descending order of number of consonants in each word.The word with the highest number of consonants is placed at left end (immediately after the number) followed by the word with the second highest number of consonants and so on.

Note: Changes in word and number take place in alternate steps starting with number first. If in a step, a number is already at the desired place then for that particular step operation will be performed on word and vice-versa.

## The given pattern:

Input: faster 24 and 37 rapid 61 progressive 18 requirement 85 building 93
Step $\mathrm{I}: 24$ faster and 37 rapid 61 progressive 18 requirement 85 building 93
Step II:24 progressive faster and 37 rapid 6118 requirement 85 building 93
Step III:24 progressive 61 faster and 37 rapid 18 requirement 85 building 93
Step IV:24 progressive 61 requirement faster and 37 rapid 1885 building 93
Step V:24 progressive 61 requirement 18 faster and 37 rapid 85 building 93
Step VI:24 progressive 61 requirement 18 building faster and 37 rapid 8593
Step VII:24 progressive 61 requirement 18 building 37 faster and rapid 8593


Step VIII:24 progressive 61 requirement 18 building 37 faster 93 and rapid 85
Step IX:24 progressive 61 requirement 18 building 37 faster 93 rapid and 85
Step X: 24 progressive 61 requirement 18 building 37 faster 93 rapid 85 and
Table showing change in the given pattern:

| Change in Word |  |  | Change in Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Word | No. of <br> consonants | Order of <br> Preference | Number | Sum of <br> digits | Order of <br> Preference |
| faster | 4 | $4^{\text {th }}$ | 24 | 6 | $1^{\text {st }}$ |
| and | 2 | $6^{\text {th }}$ | 37 | 10 | $4^{\text {th }}$ |
| rapid | 3 | $5^{\text {th }}$ | 61 | 7 | $2^{\text {nd }}$ |
| progressive | 7 | $1^{\text {st }}$ | 18 | 9 | $3^{\text {rd }}$ |
| requirement | 6 | $2^{\text {nd }}$ | 85 | 13 | $6^{\text {th }}$ |
| building | 5 | $3^{\text {rd }}$ | 93 | 12 | $5^{\text {th }}$ |

## Output for the asked input:

Input: technology 47 transfer 26 rate 72 achieving 51 extra 91 version 32
Step I:32 technology 47 transfer 26 rate 72 achieving 51 extra 91 version
Step II:32 technology 5147 transfer 26 rate 72 achieving extra 91 version
Step III:32 technology 51 transfer 4726 rate 72 achieving extra 91 version
Step IV:32 technology 51 transfer 2647 rate 72 achieving extra 91 version
Step V:32 technology 51 transfer 26 achieving 47 rate 72 extra 91 version
Step VI:32 technology 51 transfer 26 achieving 7247 rate extra 91 version
Step VII: 32 technology 51 transfer 26 achieving 72 version 47 rate extra 91
Step VIII:32 technology 51 transfer 26 achieving 72 version 9147 rate extra
Step IX:32 technology 51 transfer 26 achieving 72 version 91 extra 47 rate
Table showing change in the asked input:

| Change in Word |  |  | Change in Number |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Word | No. of <br> consonants | Order of <br> Preference | Number | Sum of <br> digits | Order of <br> Preference |
| technology | 7 | $1^{\text {st }}$ | 47 | 11 | $6^{\text {th }}$ |
| transfer | 6 | $2^{\text {nd }}$ | 26 | 8 | $3^{\text {rd }}$ |
| rate | 2 | $6^{\text {th }}$ | 72 | 9 | $4^{\text {th }}$ |
| achieving | 5 | $3^{\text {rd }}$ | 51 | 6 | $2^{\text {nd }}$ |
| extra | 3 | $5^{\text {th }}$ | 91 | 10 | $5^{\text {th }}$ |
| version | 4 | $4^{\text {th }}$ | 32 | 5 | $1^{\text {st }}$ |

91. From the following output it is clear that 9 steps are needed to reach the final output. Hence option B is correct.
92. From the following output it is clear that 'transfer' is fourth to the left of 47 in step VI.

Step VI:32 technology 51 transfer 26 achieving 7247 rate extra 91 version Hence option C is correct.
93. From the following output it is clear that "version 9147 rate" is seen in the same sequence in step VIII. Step VIII:32 technology 51 transfer 26 achieving 72 version 9147 rate extra Hence option B is correct.
94. From the following output it is clear that 'rate' is exactly between 51 and 91 in step III. Step III:32 technology 51 transfer 4726 rate 72 achieving extra 91 version Hence option A is correct.
95. From the following output it is clear that 'achieving' is seventh from right end in finl output. Step IX:32 technology 51 transfer 26 achieving 72 version 91 extra 47 rate Hence option B is correct.

## Common Explanations (96-100):

## Reference:

Input: 79 create history 88 imagined 94 every 63 leader 96
Step I: 8879 create history imagined 9463 leader 96 every
Step II: 887996 history imagined 9463 leader every create
Step III: 887996 history imagined 9463 every create leader
Step IV: 88799694 imagined 63 every create leader history
Step V: 8879969463 every create leader history imagined
Step V is the last step of the arrangement.

## Inference:

Here in the above input the numbers and the words are arranged in the different manner.

## Arrangement of numbers:

Here the numbers are arranged as the number whose sum of the digits is highest is arranged on the extreme left in the Step I after that the number whose sum of the digits is second highest is arranged the right of the number arranged in step I.

| Number | Digits Sum |
| :---: | :---: |
| 88 | 16 |
| 79 | 16 |
| 96 | 15 |
| 94 | 13 |
| 63 | 9 |

As the digits sum of both ' 88 ' and ' 79 ' is same, then the highest number i.e. 88 will be arranged first.

| Number | Arrangement Step |
| :---: | :---: |
| 88 | Step I |
| 79 | Step II |
| 96 | Step III |
| 94 | Step IV |
| 63 | Step V |

As the arrangement of the numbers follows the left to right pattern therefore it might be possible that some numbers are arranged automatically.

## Arrangement of words:

Here the words are arranged as the word having highest number of letters is arranged on the extreme left in the Step I after that the word having second highest number of letters is arranged the right of the word arranged in step I.

If the sum of the digits of two numbers is same then number which highest will be arranged first.

| Word | Number of <br> Letters |
| :---: | :---: |
| every | 5 |
| create | 6 |
| leader | 6 |
| history | 7 |
| imagined | 8 |

As the number of letters in both 'create' and 'leader' are same, then the word which comes first according to dictionary i.e. 'create' will be arranged first.

| Word | Arrangement Step |
| :---: | :---: |
| every | Step I |
| create | Step II |
| leader | Step III |
| history | Step IV |
| imagined | Step V |

As the arrangement of the words follows the right to right pattern therefore the number of steps required to complete the arrangement will not be not be less than the number of words in the given input.

## Now, the given input:

Input: 79 create history 88 imagined 94 every 63 leader 96

## Numbers:

| Number | Digit Sum | Arrangement Step |
| :---: | :---: | :---: |
| 39 | 12 | Step I |
| 74 | 11 | Step II |
| 46 | 10 | Step III |
| 53 | 8 | Step IV |
| 42 | 6 | Step V |

## Words:

| Word | Number of <br> Letters | Arrangement <br> Step |
| :---: | :---: | :---: |
| never | 5 | Step I |
| leaved | 6 | Step II |
| object | 6 | Step III |
| anyplace | 8 | Step IV |
| important | 9 | Step V |

As the number of letters in both 'leaved' and 'object' are same, then the word which comes first according to dictionary i.e. 'leaved' will be arranged first.

## Arrangement:

Input: never 42 leaved 39 important object 5346 anyplace 74
Step I: 3942 leaved important object 5346 anyplace 74 never
Step II: 397442 important object 5346 anyplace never leaved
Step III: 39744642 important 53 anyplace never leaved object
Step IV: 3974465342 important never leaved object anyplace
Step V: 3974465342 never leaved object anyplace important
Step V is the last step of the arrangement.

## Final Solution:

Input: never 42 leaved 39 important object 5346 anyplace 74
Step I: 3942 leaved important object 5346 anyplace 74 never
Step II: 397442 important object 5346 anyplace never leaved
Step III: 39744642 important 53 anyplace never leaved object
Step IV: 3974465342 important never leaved object anyplace
Step V: 3974465342 never leaved object anyplace important
Step $V$ is the last step of the arrangement.
96. Following the final solution we can say that five steps will be required to complete the given input.

Hence, the correct answer is option D.
97. Following the final solution we can say that '39 74465342 important never leaved object anyplace' will be the last but one.

Hence, the correct answer is option B.
98. Following the final solution we can say that ' 53 ' will be on the right of 'Important' in step III.

Hence, the correct answer is option $\mathbf{E}$.
99. Following the final solution we can say that there are five elements between ' 74 ' and 'leaved' in Step IV.

Hence, the correct answer is option D.
100. Following the final solution we can say that position of 'Object' will be third from right end in step V. Hence, the correct answer is option A.

## Common Explanations (101-105):

## Reference:

Input: always begin from bottom mount high

Step I: aabdho eimty inou ggnooy gmnou isst

## Inference:

In the Step I, firstly the consonants within each word in Input step are reversed in cyclic alphabetical order after that the words thus formed are arranged according to dictionary from left to right.

## For example:

The word 'Fear' after reversing the consonants in cyclic alphabetical order and arranging the letters in alphabetical order becomes 'aeiu'.

Using the same rule Step I of the given Input can be written as:

Input: fear creates demons only hope defeat
Step I: aeiu aeeghix ehmnow bmoo eoks aeeguw

## Reference:

Step II: 3443123249

## Inference:

In the Step II, the difference of numbers obtained from the sum of the numeric position in alphabetic series of each vowel and the sum of the numeric position in alphabetic series of each vowel of the same word in Step I is taken.

## For example:

The vowels in the word 'aeiu' are ' $a$ ', ' $e$ ', ' $i$ ' and ' $u$ ' and numeric position of ' $a$ ', ' $e$ ', ' $i$ ' and ' $u$ ' in alphabetic is ' 1 ', ' 5 ', ' 9 ' and ' 21 ' respectively so the sum of the numeric positions of vowels is $1+5+9+21=36$. As, there are no consonants in the word 'aeiu' so we will consider 36 as the final number.
And, the vowels in the word 'aeeghix' are ' $a$ ', ' $e$ ', ' $e$ ' and ' $i$ ' and numeric position of ' $a$ ', ' $e$ ', ' $e$ ' and ' $i$ ' in alphabetic is ' 1 ', ' 5 ', ' 5 ' and ' 9 ' respectively, so the sum of the numeric positions of vowels is $1+5+5+9=20$ and the consonants in the word 'aeeghix' are ' $g$ ', ' $h$ ' and ' $x$ ' and numeric position of ' $g$ ', ' $h$ ' and ' $x$ ' in alphabetic is ' 7 ', ' 8 ', and ' 24 ' respectively, so the sum of the numeric position of consonants is $7+8+24=3$. And, the difference of 39 and 20 is 19 so the number is 19.

Using the same rule Step II of the given Input can be written as:

Step II: $3619 \quad 38 \quad 15 \quad 10 \quad 2$

## Reference:

## Step III: 481872

## Inference:

In the Step III, the digits of first and second number are multiplied within the number and the numbers thus obtained are multiplied form a single number the same pattern is followed with third and fourth number, and fifth and sixth number.

## For example:

First and second numbers from left end is Step II are ' 36 ' and ' 19 ' respectively and after multiplying the digits of ' 36 ' and ' 19 ' with the numbers we get ' 18 ' and ' 9 ', and after multiplying ' 18 ' and ' 9 ' we get 162 . So the number is 162 .

Using the same rule Step III of the given Input can be written as:

Step III: 1621200

Reference:

## Step IV: 39

## Inference:



The first and second numbers from left end in Step III are subtracted then the digits of the number thus formed are added within the number to form the first number from left end in step IV. and the same pattern is repeated with second and third number from left end in step III to form the second number from left end in step IV.

## For example:

First and second numbers from left end in Step III are ' 162 ' and ' 120 ' respectively. The difference of ' 162 ' and ' 120 ' is 42 and the sum of the digits of ' 42 ' is ' $4+2=6$ '. So the number is 6 .

Using the same rule Step IV of the given Input can be written as:

Step IV: 63

## Reference:

Step V: 144

Step V is the last step of the arrangement.

## Inference:

In the Step V, the sum of the numbers in step IV is taken and the number thus formed is squared.

## For example:

After adding the numbers $6+3=9$ and the square of 9 is 81 . So the number is 81 .

Using the same rule Step V of the given Input can be written as:

## Step V: 81

As it is given that Step V is the last step of the arrangement so the given input is completed.
101. Following the final solution we can say that 81 will be obtained in final step of the arrangement. Hence, the correct answer is option C.
102. Following the final solution we can say that the numbers obtained in step IV are ' 6 ' and ' 3 '.

Required Value $=6 \times 3=\mathbf{1 8}$

Hence, the correct answer is option D.
103. Following the final solution we can say that 36 will represent 'Fear' in step II.

Hence, the correct answer is option A.
104. Following the final solution we can say that 'aeeguw' will be obtained in step 1 of the given arrangement.

Hence, the correct answer is option $\mathbf{E}$.
105. Following the final solution we can say that the numbers obtained in step III are ' 162 ', ' $120^{\prime}$ and ' 0 '.

Required Value $=162+120+0=282$

Hence, the correct answer is option B.

## Common Explanations (106-110):

## Reference:



Inference:
Digits are first multiplied and then are added before writing in the box of next step.


Reference:

Input:


Step 2 :

$$
\begin{array}{c|c|}
\hline 8 & 0 \\
08 \times 10=80 & 6 \mid 0 \\
\hline 6 \times 06=06
\end{array}
$$

## Inference:

Numbers are multiplied keeping the middle box common.


Step 2 :


Reference:

Input:


Step 2:

$$
\begin{array}{c|c|}
\hline 8 & 0 \\
08 \times 10=80 & 6 \\
\hline 6 \times 06=06
\end{array}
$$

Step 3 :

| 2 | 0 |
| :--- | :--- |

$80-60=20$

## Inference:

Numbers written in the boxes are subtracted.
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Input:


Step 2:

$$
\begin{array}{|l|l|l|l|}
\hline 1 & 5 & 5 & 0 \\
\hline 31 \times 50=1550
\end{array} \quad \begin{array}{|l|l|l|l|}
\hline 1 & 0 & 0 & 0 \\
\hline
\end{array}
$$

Step 3 :

$$
\begin{array}{c|c|c}
\hline 5 & 5 & 0 \\
1550-1000 \\
=550
\end{array}
$$

## Reference:

Input:


Step 2:

$$
\begin{array}{c|cc}
\hline 8 & 0 & 6 \\
3 \times 10=80 & 10 \times 06=06
\end{array}
$$

Step 3 :

$$
\begin{aligned}
& 2 \mid 0 \\
& 80-60=20
\end{aligned}
$$

Step 4 :
400
$(20)^{2}=400$

## Inference:

Number is now squared to get the final output.

Input:


Step 2:

| 1 | 5 | 5 | 0 |
| :--- | :--- | :--- | :--- |
| $31 \times 50=1550$ |  |  |  |$\quad$| $1\|0\| 0 \mid 0$ |
| :--- | :--- | :--- |
| $50 \times 20=1000$ |

Step 3 :

> | 5 | 5 | 0 |
| :---: | :---: | :---: |
| $1550-1000$ |  |  |
| $=550$ |  |  |

Step 4 :
302500
$(550)^{2}=302500$
106. 151250 is half of the value obtained in final step.

Option A, is hence the correct answer.
107. 1550 is one of the numbers obtained in step II.

Option A, is hence the correct answer.
108. As, $1550-1000=550$.

So, the Difference between the numbers obtained in step II is 550 .
Option B, is hence the correct answer..
109. 50 is one of the numbers obtained in step I.

Option D, is hence the correct answer.
110. Step IV is the required final step.

Option C, is hence the correct answer.

## Common Explanations (111-115):

Change in word: The words are rearranged as per ascending order of number of letters and placed at extreme left end.

Change in number: The numbers are rearranged as per ascending order of sum of their digits until a single digit is obtained and shifted to extreme right end.

Note- Change in word and number takes place simultaneously at each step. Only one word and one number is changed in a step.

## Reference:

Input: variety 35 spices 21 for 79 good 54 taste 46
Step I: for variety 35 spices 2179 good 54 taste 46

## Inference:

Input: strong 64 relation 25 depends 38 on 53 base 45
Step I: on strong relation 25 depends 3853 base 4564
Reference:
Step I: for variety 35 spices 2179 good 54 taste 46
Step II: good for variety 35 spices 7954 taste 4621

## Inference:

Step I: on strong relation 25 depends 3853 base 4564
Step II: base on strong relation 25 depends 53456438

## Reference:

Step II: good for variety 35 spices 7954 taste 4621
Step III: taste good for variety 35 spices 54462179

## Inference:

Step II: base on strong relation 25 depends 53456438
Step III: strong base on relation depends 5345643825

## Reference:

Step III: taste good for variety 35 spices 54462179
Step IV: spices taste good for variety 5446217935

## Inference:

Step III: strong base on relation depends 5345643825
Step IV: depends strong base on relation 4564382553

## Reference:

Step IV: spices taste good for variety 5446217935
Step V: variety spices taste good for 4621793554

## Inference:

Step IV: depends strong base on relation 4564382553
Step V: relation depends strong base on 6438255345

## Final Output:

Input: strong 64 relation 25 depends 38 on 53 base 45
Step I: on strong relation 25 depends 3853 base 4564
Step II: base on strong relation 25 depends 53456438
Step III: strong base on relation depends 5345643825
Step IV: depends strong base on relation 4564382553
Step V: relation depends strong base on 6438255345
111. relation - 53 represents the fifth element from left end in step IV and fourth element from right end in step II respectively.

Hence option D is correct.
112. The odd numbers that come between 'strong' and 'base' in step I are 25 and 53 , required difference is 28.

Hence option C is correct.

113. 45 is placed at an extreme end, thus is the odd one out, rest elements are not placed at any extreme end.

Hence option E is correct.
114. relation is third to the left of fourth element from right end in step III.

Hence option B is correct.
115. The numbers to the right of 'base' in step I are 45 and 64 , required sum is 109 .

Hence option A is correct.

## Common Explanations (116-120):

## Reference:



## Inference:

Studying the above Input and Step-1 we can say that each digit of the Step-1 is the difference of the digits of the boxes connected by arrows.

Here, difference is taken in such manner that to procure $1^{\text {st }}$ digit of $1^{\text {st }}$ box in step 1 we are taking the difference of even digits of box 1 and box 4, considering the fact that if the first element of the box is even then difference of even digits is taken first and vice versa.

Following the same pattern we can get all the elements of step-1.


Here, step-1 of the given input can be written as:


## Reference:



Step 2:

> | 2 | 6 |
| :--- | :--- |

$\square$
Inference:
Studying the step-2 we can say that each digit of step-2 is obtained by multiplying the digits of step-1.
Now, $1^{\text {st }}$ digit of $1^{\text {st }}$ box in step 2 is obtained by multiplying $1^{\text {st }}$ digit of $1^{\text {st }}$ box and $2^{\text {nd }}$ digit of $2^{\text {nd }}$ box of step- 1 , multiplication is done consecutively till a single digit is obtained.


Step 2:

| 2 | 6 | 8 | 6 |
| :---: | :---: | :---: | :---: |
| $6 \times 2=12$ | $4 \times 4=16$ | $4 \times 6=24$ | $6 \times 8=48$ |
| $\Rightarrow 1 \times 2=2$ | $\Rightarrow 1 \times 6=6$ | $\Rightarrow 2 \times 4=8$ | $\Rightarrow 4 \times 8=32$ |
| $\therefore 2$ | $\therefore 6$ | $\therefore 8$ | $\Rightarrow 3 \times 2=6$ |
|  |  |  | $\therefore 6$ |

Following the same pattern step-2 of the given input can be written as:


Reference:


Step 1:


Step 2

Step 2:


| 8 | 6 |
| :--- | :--- |

Step 3:
10
12

Inference:

Studying the step-3 we can say that each number of step-3 is obtained by addition of digits of step-2.

Here, value of $1^{\text {st }}$ box of step 3 is obtained by adding $1^{\text {st }}$ digit of box 1 and $1^{\text {st }}$ digit of box 2 of step- 2 .
Similarly, value of $2^{\text {nd }}$ box of step- 3 is obtained by adding $2^{\text {nd }}$ digit of box 1 and $2^{\text {nd }}$ digit of box 2 of step- 2 .
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Step 1:


Step 2:

| 2 | 6 | 8 | 6 |
| :---: | :---: | :---: | :---: |
| $6 \times 2=12$ | $4 \times 4=16$ | $4 \times 6=24$ | $6 \times 8=48$ |
| $\Rightarrow 1 \times 2=2$ | $\Rightarrow 1 \times 6=6$ | $\Rightarrow 2 \times 4=8$ | $\Rightarrow 4 \times 8=32$ |
| $\therefore 2$ | $\therefore 6$ | $\therefore 8$ | $\Rightarrow 3 \times 2=6$ |
|  |  |  | $\therefore 6$ |

Step 3:

$2+8=10$
$6+6=12$

Following the same pattern step-3 of the given input can be written as:


Step 2: | 8 | 6 |
| :--- | :--- | :--- |
| 8 | 2 |

$$
\begin{array}{cccc}
4 \times 2=8 & \begin{array}{c}
8 \times 6=48
\end{array} & \begin{array}{c}
6 \times 4=24
\end{array} & \begin{array}{r}
6 \times 2=12 \\
4 \times 8=32
\end{array} \\
\therefore 8 & \Rightarrow 2 \times 4=8 & \Rightarrow 1 \times 2=2
\end{array}
$$

Step 3:

## 16

8

$$
8+8=16 \quad 6+2=8
$$



Step 2:

Step 3:
10
12

Step 4:

## Inference:

Studying the step-4 we can say that the number of step-4 is obtained by taking the difference of the square of the respective values obtained in boxes of step-3.

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Step 2:

| 2 | 6 | 8 | 6 |
| :---: | :---: | :---: | :---: |
| $6 \times 2=12$ | $4 \times 4=16$ | $4 \times 6=24$ | $6 \times 8=48$ |
| $\Rightarrow 1 \times 2=2$ | $\Rightarrow 1 \times 6=6$ | $\Rightarrow 2 \times 4=8$ | $\Rightarrow 4 \times 8=32$ |
| $\therefore 2$ | $\therefore 6$ | $\therefore 8$ | $\Rightarrow 3 \times 2=6$ |

Step 3:

$2+8=10$

$6+6=12$

Step 4:

44
$(12)^{2}-(10)^{2}=44$

Following the same pattern step-4 of the given input can be written as:


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116. Following the final solution we can say that the boxes present in step-2 are [8|6] and [8|2] respectively.

Sum of digits of box $1=8+6=14$ and sum of digits of box $2=8+2=10$

Required difference $=14-10=4$

Hence the correct answer is option A.
117. Following the final solution we can say that the numbers present in step-3 are 16 and 8 respectively.

Required Sum $=16+8=24$.
Hence the correct answer is option E .
118. Following the final solution we can say that 62 will be present in step-1.

Hence the correct answer is option B.
119. Following the final solution we can say that the digits present in step-4 are [192].

Required Sum $=1+9+2=13$

Hence the correct answer is option D.
120. Following the final solution we can say that combination [4|8|2] correctly represents the 1 st digits of 3 rd box from right end, 2 nd digit of 1st box from left end and 2 nd digit of middle box of step-1

Hence the correct answer is option C.

## Common Explanations (121-125):

## Reference:



## Inference:

Studying the above Input and Step-1 we can say that each letter of the Step-1 is the middle of the letters of the box connected by arrows.

Here, for 1 st letter of 1st box in step 1 we are taking the middle letter of the first letters of box 1 and box 4. And if there are two letters or no letter in the middle then the letter which comes first in alphabetical series from the letters that are being compared from the respective boxes will be written as the value obtained.


Following the same pattern we can write all the elements of step-1.

Here, step-1 of the given input can be written as:


Reference:


| $G$ | $D$ |
| :--- | :--- |


| H | I |
| :--- | :--- |

## Inference:

Studying the step-2 we can say that each letter of step- 2 is obtained by adding numerical position of some letters of step-1.

Now, 1st letter of 1 st box in step 2 is obtained by adding numerical position of 1 st letter of 1 st and 2 nd letter of 2 nd box of step-1. And if the sum exceeds 26 then it is first decreased by 26 and then number obtained is changed into its respective letter.


Following the same pattern step-2 of the given input can be written as:


Reference:


G|D
H|

## C



## Inference:

Studying the step- 3 we can say that each number of step- 3 is obtained by subtracting some letters of step- 2 .
Here, 1st box of step 3 is obtained by subtracting numerical position of second letter of 1st box from the first letter of the same box of step-2.

Similarly, 2nd box of step-3 is obtained by subtracting numerical position of second letter of 1st box from the first letter of the same box of step-2. If the resultant is negative in value then 26 is added to it and the number obtained is changed into its respective letter.


| G\|D |  | $H$ 1 |  |
| :---: | :---: | :---: | :---: |
| D+C=G | $M+Q=D$ | $Q+Q=H$ | $\mathrm{C}+\mathrm{F}=1$ |
| $4+3=7$ | $13+17=$ | 17+17 = | $3+6=9$ |
| $\therefore \mathrm{G}$ | $30-26=4$ | $34-26=8$ | $\therefore 1$ |
|  | $\therefore$ D | :H |  |

$$
\begin{gathered}
Y \\
H-1=Y \\
8-9=
\end{gathered}
$$

$\therefore$ C


$$
-1+26=25
$$

$\therefore Y$

Following the same pattern step-3 of the given input can be written as:


$$
\begin{aligned}
& N \\
& Y-K=N \\
& 25-11=14 \\
& \therefore N
\end{aligned}
$$

Q
$H-Q=Q$
$8-17=$
$-9+26=17$
$\therefore$ Q

## Reference:



G|D
HI

C


ZD

## Inference:

Studying the step-4 we can say that each letter of step-4 is obtained by writing the next letter of the letters in the boxes in reverse order of step-3.


Following the same pattern step-4 of the given input can be written as:
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| $N$ |  |
| ---: | :--- |
| $Y-K$ | $=N$ |
| $25-11$ | $=14$ |
| $\therefore N$ |  |

$$
\begin{aligned}
& Q \\
& H-Q=Q \\
& 8-17= \\
&-9+26=17 \\
& \therefore Q
\end{aligned}
$$

$$
\frac{\mathrm{RO}}{\mathrm{~N}} \rightarrow \mathrm{O}
$$

121. Following the final solution we can say that all of the given vowels are not present in step-2.

Hence the correct answer is option E.
122. Following the final solution we can say that the letters present in step-3 are $N$ and $Q$ respectively.

Required Sum $=14+17=31$.

Hence the correct answer is option A.
123. Following the final solution we can say that $K$ is present in step- 2 .

Hence the correct answer is option B.
124. Following the final solution we can say that the letters present in step-4 are [RO] and we know that there are only two letters between R and O .

Hence the correct answer is option D.
125. Following the final solution we can say that 'TIP' can be formed using the letters present in step-1.

Hence the correct answer is option C.

## Common Explanations (126-130) :

## References:

First of all in this input we will see how we can get 68 and for getting 6 we have to do $2 \times 3=6$ and, for getting 8 we have to do $4 \times 2=8$ and so on:
$8 \times 1=8$
$3 \times 3=9$
$5 \times 1=5$
$2 \times 2=4$


## Inferences:

Now we know the pattern for step 1 so we will use the same pattern in our input which we have so:
$1 \times 5=5$
$3 \times 2=6$
$6 \times 1=6$
$4 \times 2=8$
$3 \times 2=6$
$7 \times 1=7$


References:
For second step we have to add $6+8$ and 5 so we can get 19 and $8+9$ with 4 so we can get 21

Input:

$2 \times 3=6 \quad 4 \times 2=6$

$5 \times 1=8 \quad 3 \times 4=9$

$5 \times 1=5 \quad 2 \times 2=4$

Step II:

$$
\begin{array}{c|c|}
\hline 1 & 9 \\
6+8+5=19
\end{array}
$$


$8+9+4=21$

## Inferences:

Now we know the pattern for step: Il so we will use the same pattern in it.
And it will come after using the pattern: $6+5+6=17,6+8+7=21$


Step II:


## References:

In this step we can easily understand that $1 \times 9=9,2 \times 1=2$ so we will use the same pattern in our solution:
Input:

$$
2 \times 3=6 \quad 4 \times 2=8
$$


$8 \times 1=8 \quad 3 \times 3-=9$
$5 \times 1=5 \quad 2 \times 2=4$

Step II:

> | $1 \mid$ | 9 |
| :---: | :---: |
| $6+8+5=19$ |  |

## Inferences:

Because we know the pattern so we will use it now $1 \times 7=7,2 \times 1=2$ so:


Step II:

$$
\begin{array}{c|c|}
\hline 1 \mid 7 \\
6+5+6=17
\end{array}
$$

| 2 | 1 |
| :--- | :--- |

$6+8+7=21$

## References:

Now we are on our final step which is $9 \div 2=4.5$


Step II:

$$
\begin{array}{c|c|}
\hline 1 & 7 \\
6+5+6=17
\end{array}
$$

| 2 | 1 |
| :--- | :--- |

$6+8+7=21$

## Step III:

9
$1 \times 9=9$
2
$2 \times 1=2$

Step IV:
4.5
$9 / 2=4.5$

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## Inferences:

So we can use the same pattern in our final solution $7 \div 2=3.5$


Step II:

$$
\begin{array}{c|c|}
\hline 1 \mid 7 \\
6+5+6=17
\end{array}
$$

| 2 | 1 |
| :--- | :--- |

$6+8+7=21$

Step III:

$1 \times 7=7$

$2 \times 1=2$

## Step IV:

3.5
-
126. Following the common explanation, we can say that 3.5 is the last step

Hence, the correct answer is option C.
127. The sum of the numbers of step III is 9 .

Hence, the correct answer is option A.
128. If we do half of each number in step II, the difference of those numbers will be 2 .

Hence, the correct answer is option D.
129. 67 is in step I.

Hence, the correct answer is option D.
130. The resultant number will be 31.5

Hence, the correct answer is option A.

## Common Explanations (131-135):

## Reference:

Input: drink 25 milk 38 daily 47
daily drink milk 253847

251111102428
milk drink 38 daily 4725
drink milk daily 472538
I. The step that starts with a word that has even number of letters is an odd numbered step.
II. The step number of the step that starts as well as ends with a number is a perfect square.
III. The step that ends with a prime number is below at least two steps.
IV. The step that ends with a perfect square is not the second last step.

## Inference:

As per condition III, step "daily drink milk 253847 " could either be step 3 or step 4.
As per condition II, step "25 1111102428 " could either be step 1 or 4.
As per condition I, step "milk drink 38 daily 4725 " could either be step 1 or step 3 , but as per condition IV, we can say that it is not step 3 . Thus it will be step 1.

Thus we can say that step " 251111102428 " is step 4.

With this it is confirmed that step "daily drink milk 253847 " is step 3.

So the remaining step "drink milk daily 472538 " will be step 2 .
Input: drink 25 milk 38 daily 47

Step 1: milk drink 38 daily 4725
Step 2: drink milk daily 472538
Step 3: daily drink milk 253847

Step 4: 251111102428

Change in words: Words are rearranged at the extreme left end on the basis of reverse dictionary order. Change in numbers: Numbers are rearranged at the extreme right end as per ascending order.

## Reference:

Input: drink 25 milk 38 daily 47
Step 1: milk drink 38 daily 4725

## Inference:

Input: goods 32 import 5846 value
Step 1: value goods import 584632

## Reference:

Step 1: milk drink 38 daily 4725
Step 2: drink milk daily 472538

## Inference:

Step 1: value goods import 584632
Step 2: import value goods 583246

## Reference:

Step 2: drink milk daily 472538
Step 3: daily drink milk 253847

## Inference:

Step 2: import value goods 583246
Step 3: goods import value 324658

## Reference:

Step 3: daily drink milk 253847
Step 4: 251111102428

## Inference:

The words are converted into the numerical value of their last letter considering A-Z as 1-26. The numbers are changed to the product of digits of the number in step 3.

Step 3: goods import value 324658
Step 4: 1920562440

## Final Output:

Input: goods 32 import 5846 value
Step 1: value goods import 584632
Step 2: import value goods 583246

Step 3: goods import value 324658

Step 4: 1920562440
131. Following the common explanation, we have
'value' is third to the left of 58 in step 3.

Hence option B is correct.
132. Following the common explanation, we have
'5' is fourth from right end in step 4.

Hence option D is correct.
133. Following the common explanation, we have
value comes exactly between import and goods in step 2.

Hence option A is correct.
134. Following the common explanation, we have

32 is on the immediate right of the fourth element from left end in step 2.
Hence option C is correct.
135. Following the common explanation, we have

The sum of 3 rd element from the left end and 2 nd element from right end in step IV is $5+24=29$

Hence, option A is correct.

## Common Explanations (136-140):

## Reference:

Input: 3664277291288665

Step 1: 28374519635821

## Inference:

Difference of two adjacent numbers of input is taken to for the numbers of step 1.

Input: 2346876472359812

Step 1: 2341238376386

## Reference:

Step 1: 28374519635821

Step 2: 6582648212179

## Inference:

Sum of two adjacent numbers of Step 1 is taken to for the numbers of step 2.

Step 1: 2341238376386
Step 2: 64643145100149

## Reference:

Step 2: 6582648212179

Step 3: 143918

## Inference:

Difference of first and sixth numbers from left end is taken to form the first number of step 3.
Then difference of second and fifth numbers from left end is taken to form the second number of step 3.
Then difference of third and fourth numbers from left end is taken to form the third number of step 3.

Step 2: 64643145100149

Step 3: 853614

## Reference:

Step 3: 143918
Step 4: 3288

## Inference:

Product of the tens digit of all the three numbers of step 3 is taken to form the first number of step 4.
Product of the unit digit of all the three numbers of step 3 is taken to form the second number of step 4.
Step 3: 853614
Step 4: 24120

## Reference:

Step 4: 3288
Step 5: 6

## Inference:

Sum of the digits of both the numbers is taken separately and then greater number is divided by the smaller number.

Step 4: 24120
Step 5: 2

## Final output:

Input: 2346876472359812
Step 1: 2341238376386
Step 2: 64643145100149

Step 3: 853614
Step 4: 24120
Step 5: 2
136. Following the common explanation, we have

The second highest and second lowest numbers of step 2 are 100 and 45 .
Required sum is 145 .
Hence option C is correct.
137. Following the common explanation, we have

2 numbers in step 1 are fully divisible by 2 .
Hence option B is correct.
138. Following the common explanation, we have

First and last numbers of step 3 are 85 and 14

Required difference is 71.
Hence option D is correct.
139. Following the common explanation, we have

31 is the third number from left end in step 2.
Hence option A is correct.
140. Following the common explanation, we have

48 is the odd one out as 48 cannot be seen in any of the steps.

Hence option D is correct.

## Common Explanations (141-145):

Change in words: The words are arranged as per reverse dictionary order. i.e. the word that will come last in the dictionary is rearranged at first. The words are placed at extreme left end.

Change in numbers: The numbers are changed as per ascending order of sum of their digits. i.e. the number whose sum of digits is lowest will be taken first for rearrangement. The numbers are placed at extreme right end.

## Note- Change in only one word and one number takes place simultaneously at each step.

## Reference:

Input: manage 46 time 23 work 13 create 78 explore 43 universe 84
Step I: work manage 46 time 28 create 78 explore 43 universe 8413

## Inference:

Here, trust is the first word as per reverse dictionary order and 10 is the number with lowest sum of digits. Thus these are arranged at extreme left and right ends respectively.

Input: require 51decade 22 build 10 trust 32 once 84 shattered 45
Step I: trust require 51decade 22 build 32 once 84 shattered 4510

## Reference:

Step I: work manage 46 time 23 create 78 explore 43 universe 8413
Step II: universe work manage 46 time create 78 explore 43841323

## Inference:

Here, shattered is the second word as per reverse dictionary order and 22 is the number with second lowest sum of digits. Thus these are arranged at extreme left and right ends respectively.

Step I: trust require 51decade 22 build 32 once 84 shattered 4510
Step II: shattered trust require 51decade build 32 once 84451022

## Reference:

Step II: universe work manage 46 time create 78 explore 43841323
Step III: time universe work manage 46 create 78 explore 84132343

## Inference:

Here, require is the third word as per reverse dictionary order and 32 is the number with third lowest sum of digits. Thus these are arranged at extreme left and right ends respectively.

Step II: shattered trust require 51decade build 32 once 84451022
Step III: require shattered trust 51decade build once 8445102232

## Reference:

Step III: time universe work manage 46 create 78 explore 84132343
Step IV: manage time universe work create 78 explore 8413234346

## Inference:

Here, once is the fourth word as per reverse dictionary order and 51 is the number with fourth lowest sum of digits. Thus these are arranged at extreme left and right ends respectively.

Step III: require shattered trust 51decade build once 8445102232
Step IV: once require shattered trust decade build 844510223251

## Reference:

Step IV: manage time universe work create 78 explore 8413234346
Step V: explore manage time universe work create 781323434684

## Inference:

Here, decade is the fifth word as per reverse dictionary order and 45 is the number with fifth lowest sum of digits. Thus these are arranged at extreme left and right ends respectively.

Step IV: once require shattered trust decade build 844510223251
Step V: decade once require shattered trust build 841022325145

## Reference:

Step V: explore manage time universe work create 781323434684
Step VI: create explore manage time universe work 132343468478

## Inference:

Here, build is the sixth word as per reverse dictionary order and 84 is the number with sixth lowest sum of digits. Thus these are arranged at extreme left and right ends respectively.

Step V: decade once require shattered trust build 841022325145
Step VI: build decade once require shattered trust 102232514584

## Final Output:

Input: require 51decade 22 build 10 trust 32 once 84 shattered 45
Step I: trust require 51decade 22 build 32 once 84 shattered 4510
Step II: shattered trust require 51decade build 32 once 84451022
Step III: require shattered trust 51decade build once 8445102232
Step IV: once require shattered trust decade build 844510223251
Step V: decade once require shattered trust build 841022325145
Step VI: build decade once require shattered trust 102232514584
141. Following the common explanation, we have require is third to the left of 51 in step III.

Hence option C is correct.
142. Following the common explanation, we have

51 and 32 come between trust and once in step II, thus the required sum is 83 .
Hence option D is correct.
143. Following the common explanation, we have
decade 45 represents the elements at extreme ends in step V .
Hence option B is correct.
144. Following the common explanation, we have
"once require shattered trust decade build 8445102232 51" represents the step IV.
Step IV: once require shattered trust decade build 844510223251
Hence option C is correct.
145. Following the common explanation, we have

The difference of and is -
9th element from the right end in step III - 51

8th element from left end in step VI-22
Difference:
$51-22=29$

Hence, option B is the correct answer.

## Common Explanations (146-150):

Logic: The logic for rearrangement works in two steps.
Step 1: Firstly all the words are arranged at extreme left end in descending order of number of letters within the word. Only one word is rearranged at each step.

Step 2: When the arrangement is arranged as per descending order of number of letters of the word then all the words are arranged as per alphabetical order such that the word that comes first as per alphabetical order is shifted to extreme left end then the second word as per alphabetical order is shifted second from left end and so on. Only one word is arranged at one step.

## Reference:

Input : Letters Received Box Post Office
Step I: Received Letters Box Post Office

## Inference:

Input: Online Recharge Website Pay Less
Step I: Recharge Online Website Pay Less

## Reference:

Step I: Received Letters Box Post Office
Step II: Received Letters Office Box Post

## Inference:



Step I: Recharge Online Website Pay Less
Step II: Recharge Website Online Pay Less

## Reference:

Step II: Received Letters Office Box Post
Step III: Received Letters Office Post Box
Step IV: Box Received Letters Office Post
By Step IV, we can see that all the words are arranged as per descending order of number of letters.

## Inference:

Step II: Recharge Website Online Pay Less
Step III: Recharge Website Online Less Pay
In Step III, we can see that all the words are arranged as per descending order of number of letters, thus from step IV onwards we will rearrange them in alphabetical order.

## Reference:

Step IV: Box Received Letters Office Post
Step V : Box Letters Received Office Post

## Inference:

Step III: Recharge Website Online Less Pay
Step IV: Less Recharge Website Online Pay

## Reference:

Step V : Box Letters Received Office Post
Step VI: Box Letters Office Received Post

## Inference:

Step IV: Less Recharge Website Online Pay
Step V: Less Online Recharge Website Pay

## Reference:

Step VI: Box Letters Office Received Post
Step VII: Box Letters Office Post Received

## Inference:

Step V: Less Online Recharge Website Pay
Step VI: Less Online Pay Recharge Website

The given arrangement is complete as all the words are now arranged as per alphabetical order. Thus Step VI is the final output.

Final Output:
Input: Online Recharge Website Pay Less
Step I: Recharge Online Website Pay Less
Step II: Recharge Website Online Pay Less
Step III: Recharge Website Online Less Pay
Step IV: Less Recharge Website Online Pay
Step V: Less Online Recharge Website Pay
Step VI: Less Online Pay Recharge Website
146. Following the common explanation, we have

The fifth word from right end in step III is Recharge and second word to its right is "Online".

Hence option C is correct.
147. Following the common explanation, we have

Less Recharge Website Online Pay is the step IV of the output.
Hence option B is correct.
148. Following the common explanation, we have
"Less Online Pay Recharge Website" is the final step of the output.
Hence option D is correct.
149. Following the common explanation, we have

Pay is second to the right of Website in step II.
Hence option B is correct.
150. Following the common explanation, we have

In step V, Less is second to the left of Recharge.

Hence option C is correct.

## Common Explanations (151-155):

Change in Words: Words are rearranged as per ascending order of number of letters. Words are arranged at extreme right end.

Change in Numbers: The numbers are changed as per ascending order of the product of digits. Numbers are arranged at extreme left end.

## Reference:

Input : toy 82 craft 73 artist 55 fragment 68 wrinkle 27

Step I : 2782 craft 73 artist 55 fragment 68 wrinkle toy

## Inference:

Here " 28 " is the number which has the lowest product of digits (16) and "jam" is the word with lowest number of letters.

Input : action 46 frog 67 jam 28 flatter 59 terrific 39
Step I : 28 action 46 frog 67 flatter 59 terrific 39 jam

## Reference:

Step I: 2782 craft 73 artist 55 fragment 68 wrinkle toy
Step II : 822773 artist 55 fragment 68 wrinkle toy craft
Inference:
Here " 46 " is the number which has the second lowest product of digits (24) and "frog" is the word with second lowest number of letters.

Step I : 28 action 46 frog 67 flatter 59 terrific 39 jam
Step II: 4628 action 67 flatter 59 terrific 39 jam frog

## Reference:

Step II : 822773 artist 55 fragment 68 wrinkle toy craft
Step III: 73822755 fragment 68 wrinkle toy craft artist

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## Inference:

Here " 39 " is the number which has the third lowest product of digits (27) and "action" is the word with third lowest number of letters.
Step II: 4628 action 67 flatter 59 terrific 39 jam frog

Step III: 39462867 flatter 59 terrific jam frog action

## Reference:

Step III: 73822755 fragment 68 wrinkle toy craft artist

Step IV: 55738227 fragment 68 toy craft artist wrinkle

## Inference:

Here " 67 " is the number which has the fourth lowest product of digits (42) and "flatter" is the word with fourth lowest number of letters.

Step III: 39462867 flatter 59 terrific jam frog action

Step IV: 6739462859 terrific jam frog action flatter
Reference:

Step IV: 55738227 fragment 68 toy craft artist wrinkle

Step V : 6855738227 toy craft artist wrinkle fragment

## Inference:

Here " 59 " is the number which has the fifth lowest product of digits (45) and "terrific" is the word with fifth lowest number of letters.

Step IV: 6739462859 terrific jam frog action flatter

Step V: 5967394628 jam frog action flatter terrific

## Final Output:

Input : action 46 frog 67 jam 28 flatter 59 terrific 39 Step I : 28 action 46 frog 67 flatter 59 terrific 39 jam Step II: 4628 action 67 flatter 59 terrific 39 jam frog Step III: 39462867 flatter 59 terrific jam frog action Step IV: 6739462859 terrific jam frog action flatter Step V: 5967394628 jam frog action flatter terrific
151. Following the common explanation, we have
"flatter" is third to the left of 39 in step II.
Hence option B is correct.
152. Following the common explanation, we have
"terrific" is third to the right of 46 in step IV.
Hence option D is correct.
153. Following the common explanation, we have

11 is the difference between the second element from left end in step II and second element from right end in step I.

Hence option C is correct.
154. Following the common explanation, we have
terrific is the only word towards the left of "jam" in step IV.
Hence option A is correct.
155. Following the common explanation, we have
' 28 ' comes exactly between 39 and frog in the final output.
Hence option B is correct.

## Common Explanations (156-160):

Input: 2347526971
Step I: 1638206417
Step II: 1638642017
Step III: 2133300624
Step IV: 0621243033
Step V: 1127313842
Step I. Multiply the digits of each two digit number given in Input within itself and add 10 to each resultant.

Step II. Place the biggest number acquired in Step I in the middle.
Step III. Add the digits of each two digit number acquired in Step II within itself and multiply the resultant by 3.

Step IV. Place the numbers in ascending order.
Step V. Add consecutive natural number (starting from 5, $6 \ldots$... ) to each number acquired in Step IV.
Based on the same rule, we get the following stesps for the given Input:

Input: 5629347241
Step I: 4028222414
Step II: 2822402414
Step III: 3012121815
Step IV: 1212151830
Step V: 1718222639
156. Based on the following illustration, we get that the number that comes in the middle of Step II: 40 Option B is hence the correct answer.
157. Following the illustration below we can say that ' 16 ' is not present in Step IV for the given input. Option D is hence the correct answer.
158. Following the common explanation, we have

Clearly, the output: 3012121815 is acquired at Step III.

Option C is hence the correct answer.
159. Following the common explanation, we have

Evidently, all the given options are false with respect to the position of 24 in Step II.
Hence, option E is correct.
160. Following the common explanation, we have

In Step II, the digits of each number are being added to themselves within the number and then 10 is being added to the resultant.

Thus, 47 will become $=(4+7) \times 3=33$
Hence, option A is correct.

## Common Explanations (161-165):

## Reference:

Input: toy for 35276197 weight stroke

Step I: 61 toy for 352797 weight stroke
Step II: 6135 toy for 2797 weight stroke
Step III: 613527 toy for 97 weight stroke
Step IV: 61352797 toy for weight stroke

Step V: 61352797 for toy weight stroke
Step VI: 61352797 for stroke toy weight
If we observe the given steps, the following rules are being applied:
Step I. In each step, the number the sum of the digits of which is the lowest, is being arranged at extreme left.
Step II. Next bigger number is arranged to the immediate right of the number achieved in previous step and we carry on in the same manner till we achieve all the numbers in ascending order. This continues till Step IV.

Step V. The word that comes prior to the other given words is placed right after the last number and we keep on arranging all the words in such a manner till we get in ascending order.

Following the rules describe above, we get the steps for the given input as:
Input: 73 jam trim 2931 clear team 81

Step I: 3173 jam trim 29 clear team 81
Step II: 318173 jam trim 29 clear team
Step III: 31817329 jam trim clear team
Step IV: 31817329 clear jam trim team
Step IV: 31817329 clear jam team trim
And Step V is the last step of the rearrangement.
161. Following common explanation, we get that the term ' 73 ' is 3 rd from the left end in the step III. Option A is hence the correct answer.
162. Following common explanation, we get ' 5 ' as the correct answer.

Option C is hence the correct answer.
163. Following common explanation we get that it is ' 29 ' which is the 4 th term from the left end in step IV. Option E is hence the correct answer.
164. Following the given condition, we get step I as:

Step I: 8173 jam trim 2939 clear team
Clearly, ' 39 ' is third from the right end.
Option B is hence the correct answer.
165. Following the common explanation, we can observe that ' 81 ' is 7 th from the right end in step II.

Option B is hence the correct answer.

## Common Explanations (166-170):

Change in words: The words are rearranged in descending order of number of consonants in a word. Words are placed at extreme left end of the arrangement.

Change in numbers: Numbers are arranged in ascending order at left end just next to the rearranged word.
Note- Only one word and one number is changed at one step. Change in words and numbers takes place at every step.

## Reference:

Input: grief 37 myth 84 rubbish 53 constant 45 persistence 26
Step I: persistence 26 grief 37 myth 84 rubbish 53 constant 45

## Inference:

Input: label 51 rhythm 22 sabotage 82 complete 91 sufficiency 16
Step I: sufficiency 16 label 51 rhythm 22 sabotage 82 complete 91

## Reference:

Step I: persistence 26 grief 37 myth 84 rubbish 53 constant 45
Step II: constant 37 persistence 26 grief myth 84 rubbish 5345

## Inference:

Step I: sufficiency 16 label 51 rhythm 22 sabotage 82 complete 91
Step II: rhythm 22 sufficiency 16 label 51 sabotage 82 complete 91

## Reference:

Step II: constant 37 persistence 26 grief myth 84 rubbish 5345
Step III: rubbish 45 constant 37 persistence 26 grief myth 8453

## Inference:

Step II: rhythm 22 sufficiency 16 label 51 sabotage 82 complete 91
Step III: complete 51 rhythm 22 sufficiency 16 label sabotage 8291

## Reference:

Step III: rubbish 45 constant 37 persistence 26 grief myth 8453
Step IV: myth 53 rubbish 45 constant 37 persistence 26 grief 84

## Inference:

Step III: complete 51 rhythm 22 sufficiency 16 label sabotage 8291
Step IV: sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91

## Reference:

Step IV: myth 53 rubbish 45 constant 37 persistence 26 grief 84
Step V: grief 84 myth 53 rubbish 45 constant 37 persistence 26

## Inference:

Step IV: sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91
Step V: label 91 sabotage 82 complete 51 rhythm 22 sufficiency 16
166. Following common explanation, we get that
'sabotage' is on the immediate right of ' 91 ' in step V .

Hence option B is correct.
167. Following common explanation, we get that
"sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91 " is step IV.

Hence option C is correct.
168. Following common explanation we get that
'rhythm' comes exactly between 'complete' and 'sufficiency' in step III.

Hence option B is correct.
169. Following common explanation we get that

3 words are to the left of 51 in step II.
Hence option A is correct.
170. Following the common explanation, we get that

The even numbers that come between 'label' and 'sufficiency' in step V are 82 and 22.

Required sum is 104.

Hence option D is correct.

## Common explanation (171-175) :

Change in words: The words are rearranged in descending order of number of consonants in a word. Words are placed at extreme left end of the arrangement.

Change in numbers: Numbers are arranged in ascending order at left end just next to the rearranged word.
Note- Only one word and one number is changed at one step. Change in words and numbers takes place at every step.

## Reference:

Input: grief 37 myth 84 rubbish 53 constant 45 persistence 26
Step I: persistence 26 grief 37 myth 84 rubbish 53 constant 45

## Inference:

Input: label 51 rhythm 22 sabotage 82 complete 91 sufficiency 16
Step I: sufficiency 16 label 51 rhythm 22 sabotage 82 complete 91

## Reference:

Step I: persistence 26 grief 37 myth 84 rubbish 53 constant 45
Step II: constant 37 persistence 26 grief myth 84 rubbish 5345

## Inference:

Step I: sufficiency 16 label 51 rhythm 22 sabotage 82 complete 91
Step II: rhythm 22 sufficiency 16 label 51 sabotage 82 complete 91

## Reference:

Step II: constant 37 persistence 26 grief myth 84 rubbish 5345
Step III: rubbish 45 constant 37 persistence 26 grief myth 8453

## Inference:

Step II: rhythm 22 sufficiency 16 label 51 sabotage 82 complete 91
Step III: complete 51 rhythm 22 sufficiency 16 label sabotage 8291

## Reference:

Step III: rubbish 45 constant 37 persistence 26 grief myth 8453
Step IV: myth 53 rubbish 45 constant 37 persistence 26 grief 84

## Inference:

Step III: complete 51 rhythm 22 sufficiency 16 label sabotage 8291
Step IV: sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91

## Reference:

Step IV: myth 53 rubbish 45 constant 37 persistence 26 grief 84
Step V: grief 84 myth 53 rubbish 45 constant 37 persistence 26

## Inference:

Step IV: sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91
Step V: label 91 sabotage 82 complete 51 rhythm 22 sufficiency 16
171. Following common explanation, we get that
'sabotage' is on the immediate right of ' 91 ' in step V.

Hence option B is correct.
172. Following common explanation, we get that
"sabotage 82 complete 51 rhythm 22 sufficiency 16 label 91 " is step IV.
Hence option C is correct.
173. Following common explanation we get that
'rhythm' comes exactly between 'complete' and 'sufficiency' in step III.

Hence option B is correct.
174. Following common explanation we get that

3 words are to the left of 51 in step II.

Hence option A is correct.
175. Following the common explanation, we get that

The even numbers that come between 'label' and 'sufficiency' in step V are 82 and 22.
Required sum is 104.

Hence option D is correct.

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## Common Explanations (176-180):

## Reference:

Input : floating current boat swing stream and sail along
Step I : 1614810126810

## Inference:

The words are changed to numbers on the basis of their number of letters. The logic performed here is : Multiplication.

The number of letters of each word is multiplied by 2 and written in the same order as their resoective words are written from left to right.

For example: floating has 8 letters, so its respective numerical value will be 16 .
Performing the above mentioned logic we get the following values for step I.

Input : season come and go weather remain same forever
Step I : 128641412814

## Reference:

Step I : 1614810126810
Step II : 28201620

## Inference:

The numbers of step I are added in order to obtain the step II such that the first number from left end is added with the fifth number from left end, second number from left end with sixth number from left end and so on.

So, the logic performed is: Addition.

Performing the above mentioned logic we get the following values for step II.
Step I : 128641412814
Step II : 26201418

## Reference:

Step II : 28201620

Step III: 84

## Inference:

The difference of the numbers of step II is obtained such that the difference of first and second number from left end is taken. Then difference of third and fourth numbers is taken.

So, the logic performed is: Subtraction.

Performing the above mentioned logic we get the following values for step III.
Step II : 26201418
Step III: 64

Reference:
Step III: 84

Step IV: 4

## Inference:

The greater number of step III is divided by the smaller number of step III and then the obtained dividend is doubled.

So, the logic performed is: Division.
Performing the above mentioned logic we get the following values for step III.
Step III: 64

Step IV: 3

Final Output:
Input : season come and go weather remain same forever

Step I : 128641412814

Step II : 26201418
Step III: 64

Step IV: 3
176. Following common explanation, we get that

9 is the third multiple of 3 , which is the final output.

Hence option C is correct.
177. Following common explanation, we get that

13 is not among the given numbers, thus the odd one out.
Hence option B is correct.
178. Following common explanation we get that

If in the given input 'and' is replaced by 'but', then nothing will change because number of letters in 'and' and 'but' are same.

Hence option D is correct.
179. Following common explanation we get that

Second value from right end in step I is 8.

Second value from right end in step III is 6.

Required sum = 14.
Hence option A is correct.
180. Following the common explanation, we get that

Final output is 3 , so after subtracting 3 from each value of step II, it will become:

23171115

Hence option C is correct.


## Common Explanations (181-185):

The words are arranged according to the English alphabetical series and are placed at the left end in each step.
Input : story For around on was He at

Step I: around story For on was He at

Step II: around at story for on was he
Step III: around at for story on was he

Step IV: around at for he story on was

Step V: around at for he on story was
181. From common explanation, we can see that 'Step IV: is around at for he story on was'

Hence, option C is correct answer.
182. From common explanation, we can see that 'Step III: an and every for peer to' Hence, option B is correct answer.

183. From common explanation we can see 'Step $V$ ' is the last but one step.

Hence, option D is correct.
184. From common explanation, we can see 'step IV' will be the last step.

Hence, option E is the correct answer.
185. From common explanation, we can see that 'the third word from the right end in step III ' will be the 'over' step.

Hence, option C is the correct answer.
186. The numbers are arranged in descending order while the words are arranged in alphabetical order alternately. The position of only one term is altered at each step.

| Input | $:$ | host | 15 | 32 | page | 43 | over | mother | 92 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | 92 | host | 15 | 32 | page | 43 | over | mother |
| Step II | $:$ | 92 | host | 43 | 15 | 32 | page | over | mother |
| Step III | $:$ | 92 | host | 43 | mother | 15 | 32 | page | over |
| Step IV | $:$ | 92 | host | 43 | mother | 32 | 15 | page | over |
| Step V | $:$ | 92 | host | 43 | mother | 32 | over | 15 | page |

Clearly, step V is the last step and step IV is the last but one.

Hence, Option A is correct.
187. The numbers are arranged in descending order while the words are arranged in alphabetical order alternately. The position of only one term is altered at each step.

| Step II | $:$ | 67 | cat | 12 | 25 | dog | fight | man | 42 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step III | $:$ | 67 | cat | 42 | 12 | 25 | dog | fight | man |
| Step VI | $:$ | 67 | cat | 42 | dog | 12 | 25 | fight | man |
| Step V | $:$ | 67 | cat | 42 | dog | 25 | 12 | fight | man |

Hence, Option B is correct.
188. The numbers are arranged in descending order while the words are arranged in alphabetical order alternately. The position of only one term is altered at each step.

| Input | $:$ | world | 23 | new | 47 | major | 13 | 62 | desk |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I | $:$ | 62 | world | 23 | new | 47 | major | 13 | desk |
| Step II | $:$ | 62 | desk | world | 23 | new | 47 | major | 13 |
| Step III | $:$ | 62 | desk | 47 | world | 23 | new | major | 13 |
| Step VI | $:$ | 62 | desk | 47 | major | world | 23 | new | 13 |
| Step V | $:$ | 62 | desk | 47 | major | 23 | world | new | 13 |

Hence, Option C is correct.
189. The numbers are arranged in descending order while the words are arranged in alphabetical order alternately. The position of only one term is altered at each step.

| Step III | $:$ | 81 | boat | 73 | wheel | spike | dancer | 32 | 59 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step VI | $:$ | 81 | boat | 73 | dancer | wheel | spike | 32 | 59 |
| Step V | $:$ | 81 | boat | 73 | dancer | 59 | wheel | spike | 32 |
| Step VI | $:$ | 81 | boat | 73 | dancer | 59 | spike | wheel | 32 |
| Step VII | $:$ | 81 | boat | 73 | dancer | 59 | spike | 32 | wheel |

Clearly, Step VII is the last step, thus, four more steps are required to complete the rearrangement.
Hence, Option C is correct.
190. The numbers are arranged in descending order while the words are arranged in alphabetical order alternately. The position of only one term is altered at each step.

| Step III | $:$ | 81 | boat | 73 | wheel | spike | dancer | 32 | 59 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step VI | $:$ | 81 | boat | 73 | dancer | wheel | spike | 32 | 59 |
| Step V | $:$ | 81 | boat | 73 | dancer | 59 | wheel | spike | 32 |
| Step VI | $:$ | 81 | boat | 73 | dancer | 59 | spike | wheel | 32 |
| Step VII | $:$ | 81 | boat | 73 | dancer | 59 | spike | 32 | wheel |
|  |  |  |  |  |  |  |  |  |  |
| Hence, Option B is correct. |  |  |  |  |  |  |  |  |  |

191. The words are arranged in reverse alphabetical order while numbers are arranged in ascending order alternately.

| Step II : | Zebra | 12 | bank | carriage | 46 | 31 | 29 | dusk |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step III : | Zebra 12 | dusk | bank | carriage | 46 | 31 | 29 |  |
| Step IV : | Zebra | 12 | dusk | 29 | bank carriage | 46 | 31 |  |
| Step V : | Zebra | 12 | dusk | 29 | carriage | bank | 46 | 31 |
| Step VI: | Zebra | 12 | dusk | 29 | carriage | 31 | bank | 46 |

Clearly, step VI is the last step. So, step V is the last but one.

Hence, option A is correct.
192. The words are arranged in reverse alphabetical order while numbers are arranged in ascending order alternately.

| Input : | age | die | 72 | 53 | 35 | hold | goal | 26 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step I : | hold | age | die | 72 | 53 | 35 | goal | 26 |
| Step II : | hold | 26 | age | die | 72 | 53 | 35 | goal |
| Step III : | hold | 26 | goal | age | die | 72 | 53 | 35 |
| Step IV : | hold | 26 | goal | 35 | age | die | 72 | 53 |
| Step V : | hold | 26 | goal | 35 | die | age | 72 | 53 |
| Step VI: | hold | 26 | goal | 35 | die | 53 | age | 72 |

Clearly, Step VI is the last step for the given input.

Hence, option C is correct.
193. The words are arranged in reverse alphabetical order while numbers are arranged in ascending order alternately.

| Step II | $:$ | win | 12 | 92 | for | 81 | always | 36 | home |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step III | $:$ | win | 12 | home | 92 | for | 81 | always | 36 |
| Step IV | $:$ | win | 12 | home | 36 | 92 | for | 81 | always |
| Step V | $:$ | win | 12 | home | 36 | for | 92 | 81 | always |
| Step VI | $:$ | win | 12 | home | 36 | for | 81 | 92 | always |
| Step VII | $:$ | win | 12 | home | 36 | for | 81 | always | 92 |

Hence, option E is correct.
194. Since the terms can be rearranged in several ways, so it is not possible to determine the input accurately.

Hence, option D is correct.
195. The words are arranged in reverse alphabetical order while numbers are arranged in ascending order alternately.

Input: 36 Sky 19 Night 9055 Bear Lotus White
Step I: White 36 Sky 19 Night 9055 Bear Lotus
Step II: White 1936 Sky Night 9055 Bear Lotus
Step III: White 19 Sky 36 Night 9055 Bear Lotus
Step IV: White 19 Sky 36 Night 5590 Bear Lotus
Step V: White 19 Sky 36 Night 55 Lotus 90 Bear

Hence, option A is the correct answer.

## Common Explanations (196-200):

| Input | $\mathbf{:}$ | class | $\mathbf{2 5}$ | war | $\mathbf{1 5}$ | race | $\mathbf{7 3}$ | heap | $\mathbf{5 8}$ | just | $\mathbf{8 8}$ | take | $\mathbf{3 8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Step I | $:$ | 88 | class | 25 | war | 15 | race | 73 | heap | 58 | just | take | 38 |
| Step II | $:$ | 88 | 25 | war | 15 | race | 73 | heap | 58 | just | take | 38 | class |
| Step III | $:$ | 88 | 73 | 25 | war | 15 | race | heap | 58 | just | take | 38 | class |
| Step IV | $:$ | 88 | 73 | 25 | war | 15 | race | 58 | just | take | 38 | class | heap |
| Step V | $:$ | 88 | 73 | 58 | 25 | war | 15 | race | just | take | 38 | class | heap |
| Step VI | $:$ | 88 | 73 | 58 | 25 | war | 15 | race | take | 38 | class | heap | just |
| Step VII | $:$ | 88 | 73 | 58 | 38 | 25 | war | 15 | race | take | class | heap | just |
| Step VIII | $:$ | 88 | 73 | 58 | 38 | 25 | war | 15 | take | class | heap | just | race |
| Step IX | $:$ | 88 | 73 | 58 | 38 | 25 | 15 | war | take | class | heap | just | race |
| Step X | $:$ | 88 | 73 | 58 | 38 | 25 | 15 | war | class | heap | just | race | take |
| Step XI | $:$ | 88 | 73 | 58 | 38 | 25 | 15 | class | heap | just | race | take | war |

196. After careful analysis of the given input and various steps of rearrangement, it is evident that in the first step the highest number is placed at the extreme left position and in the second step the word which comes first in the alphabetical order is placed at the extreme right position. In the next step second highest number is placed at the second position from the left. After that step the word which comes second in the alphabetical order is placed at the extreme right position. These two steps are continued alternatively till all the numbers get arranged in the descending order from the left and all the words get arranged in alphabetical order after the numbers.

| Input | class | 25 | war | 15 | race | 73 | heap | 58 | just | 88 | take | 38 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Step I | 88 | class | 25 | war | 15 | race | 73 | heap | 58 | just | take | 38 |
| Step II | 88 | 25 | war | 15 | race | 73 | heap | 58 | just | take | 38 | class |
| Step III | 88 | 73 | 25 | war | 15 | race | heap | 58 | just | take | 38 | class |
| Step IV | 88 | 73 | 25 | war | 15 | race | 58 | just | take | 38 | class | heap |
| Step V | 88 | 73 | 58 | 25 | war | 15 | race | just | take | 38 | class | heap |
| Step VI | 88 | 73 | 58 | 25 | war | 15 | race | take | 38 | class | heap | just |
| Step VII | 88 | 73 | 58 | 38 | 25 | war | 15 | race | take | class | heap | just |
| Step VIII | 88 | 73 | 58 | 38 | 25 | war | 15 | take | class | heap | just | race |
| Step IX | 88 | 73 | 58 | 38 | 25 | 15 | war | take | class | heap | just | race |
| Step X | 88 | 73 | 58 | 38 | 25 | 15 | war | class | heap | just | race | take |
| Step XI | 88 | 73 | 58 | 38 | 25 | 15 | class | heap | just | race | take | war |

The word 'war' is sixth from the left end in step VIII.
197. From common explanation, we can Step XI is the last step 'and 25 ' is the ninth from the right in Step VI. Hence, option B is correct.
198. From common explanation, we can ' 15 ' is seventh from the right end in Step IX.

Hence, option D is correct.
199. From common explanation, we can Eleven Steps were required to complete the arrangement.

Hence, option A is correct.
200. From common explanation, we have Option (C) is the Step $X$.

Hence, option C is correct.


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