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Puzzle Test Questions for IBPS PO Mains, SBI PO Mains and RBI Scale Pre Exams.

Set No 55

Directions: Read the given information carefully and answer the questions given beside:

There is a big wall in Reliance Digital showroom which is facing in south direction. This wall is in eight different parts of eight different background color i.e. Red, Orange, Yellow, Purple, Green, Blue, White and Black but not necessarily in the same order. Each part has some LEDs and LCDs on the wall and the numbers of LED and LCDs varied between 1 to 8 but not necessarily in the same order. Each part contains at least 1 LED and 1 LCD, and no two or more part contains same number of LED or LCD. The size of each LED is 42 cm and size of each LCD is 36 cm means 1 LED cover 42cm and 1 LCD covers 36cm of the wall.

The difference between a part where background color is Purple and a part which has 1 LED is 2. There are two parts between a part which has 1 LCD and a part which has Red colored background. Red colored background part has less LED than the green colored background part. A part which is at the left corner of the wall covers 318cm and has 5 LEDs. Green colored background covers the same space as the orange colored background covers. Yellow colored background has 1 LCD more than Black colored background.

The part which has four LCDs is not an immediate neighbor of the part which has 2 LED. The part where background color is red is either fifth or fourth from the right corner. The color of the part which has 4 LEDs is blue and this part covers 420cm. The part which has 6 LCDs is immediate right of that part which has 1 LCD and the background color of this part is Purple. The part which covers 342cm of the wall is fourth to the right of that part which has 4 LCDs. The part which has two LEDs has neither 1 nor 4 LCDs. Black colored background's part has 6 LEDs and 2 LCDs. Orange colored background part and red colored part are not immediate neighbors. A part which covers 420cm of the wall is an immediate neighbor of that part which has 1 LCD. A part which has 2 LEDs is seventh from the right corner.

1. Which of the following part covers 222cm?

- A. A part which has 5 LCDs B. A part which is third to the left of purple colored part
C. Red colored part D. Cannot be determined E. None of these

2. What is the color of the background which covers space of 318cm?

- A. Orange B. Black C. White D. Yellow E. None of these

3. Green colored part has how many LCDs?

- A. 8 B. 5 C. 1 D. 4 E. None of these

4. Which of the following part has the maximum number of LCDs?

- A. A part which covers 318cm B. Black colored part C. Cannot be determined
D. Either A or B E. None of these

5. Four of the following five are alike in a certain way that they form a group. Which of the following doesn't belong to that group?

A. Red

B. Black

C. Orange

D. Yellow

E. Purple

Correct Answers:

1	2	3	4	5
A	D	C	E	A

Common explanation:

We will denote LED as E and LCD as C, in the table while solving.

Reference:

The part where background color is Red is either fifth or fourth from the right corner.

A part which has 2 LEDs is seventh from the right corner.

Inference:

As, the part having Red background has two possibilities, therefore, two cases generates here:

			R	Case:1	L			
Color					Red			
Number of product							2E+	
Space								
Hints:								

			R	Case:2	L			
Color				Red				
Number of product							2E+	
Space								
Hints:								

Reference:

There are two parts between a part which has 1 LCD and a part which has Red colored background.

The part which has two LEDs has neither 1 nor 4 LCDs.

Inference:

Because of having two possibilities again in case 1, it further needs to be generated as Case 1A and Case 1B.

			R	Case:1A	L			
Color					Red			
Number of product							2E+	+1C
Space								
Hints:							1C/4Cx	

			R	Case	L			
Color				1B	Red			
Number of product		+1C					2E+	
Space								
Hints:							1C/4Cx	

			R	Case:2	L			
Color				Red				
Number of product	+1C						2E+	
Space								
Hints:							1C/4Cx	

Reference:

The part which has four LCDs is not an immediate neighbor of that part which has 2 LED.

The part which covers 342cm of the wall is fourth to the right of that part which has 4 LCDs.

Inference:

There is only one place for 4LCDs in all the three cases, so:

			R	Case	L			
Color				1A:	Red			
Number of product					+4C		2E+	+1C
Space	342							
Hints:						4Cx	1C/4Cx	4Cx

			R	Case	L			
Color				1B:	Red			
Number of product	+1C				+4C		2E+	
Space	342							
Hints:						4Cx	1C/4Cx	4Cx

			R	Case:2	L			
Color					Red			
Number of product		+1C			+4C		2E+	
Space	342							
Hints:						4Cx	1C/4Cx	4Cx

Reference:

The part which has 6 LCDs is immediate right of that part which has 1 LCD and the background color of this part is Purple.

Inference:

Case 1B fails here as it cannot fulfill the required condition.

Now, as we know:

Sizes – LED : 42cm, LCD: 36cm

In case 1:

There are 2 LEDs and 4 LCDs, hence,

$42 \times 2 = 84\text{cm}$, $36 \times 6 = 216\text{cm}$

So, total space occupied is $216 + 84 = 300\text{cm}$.

In case 2:

The immediate right part of the part having 1 LCD in this case is already known to be 342cm; we just need to determine the no. of LEDs this part have.

$$X + 6C = 342\text{cm}$$

$$X + 6 \times 36 = 342\text{cm}$$

$$X + 216 = 342\text{cm}$$

$$X = 342 - 216 = 126\text{cm}$$

$$126/42 = 3 \text{ so, this part is having 3 LEDs.}$$

			R	Case:1	L			
Color					Red		Purple	
Number of product					+4C		2E+6C	+1C
Space	342						300	
Hints:						4Cx	1C/4Cx	4Cx

			R	Case:2	L			
Color	Purple				Red			
Number of product	3E+6C	+1C			+4C		2E+	
Space	342							
Hints:						4Cx	1C/4Cx	4Cx

Reference:

The difference between the part where background color is Purple and a part which has 1 LED is 2.
 A part which covers 420cm of the wall is an immediate neighbor of that part which has 1 LCD.
 The color of the part which has 4 LEDs is blue and this part covers 420cm.

Inference:

In case 1, there is no place left for 420cm part therefore, so case 1 fails here:

			R Case:2 L					
Color	Purple		Blue		Red			
Number of product	3E+6C	+1C	4E+	1E+	+4C		2E+	
Space	342		420					
Hints:						4Cx	1C/4Cx	4Cx

Reference:

A part which is at the left corner of the wall covers 318cm and has 5 LEDs.

Inference:

As, Size of 1 LED = 42cm so, size of 5 LED = $5 \times 42 = 210$ cm.
 The remaining part for LCDs = $318 - 210 = 108$.
 Now, the no. of LCDs = $108 / 36 = 3$ LCD.

			R L					
Color	Purple		Blue		Red			
Number of product	3E+6C	+1C	4E+	1E+	+4C		2E+	5E+3C
Space	342		420					318
Hints:								

Reference:

Black colored background's part has 6 LEDs and 2 LCDs.
 Yellow colored background has 1 LCD more than Black colored background.

Inference:

There is only one place for 6 LEDs and 2 LCDs and as Yellow colored background part has 3 LCDs hence left most part is that one.

Size of the Black colored background is:

$$6 \times 42 + 2 \times 36 = 252 + 72 = 324\text{cm}$$

			R L					
Color	Purple		Blue		Red	Black		Yellow
Number of product	3E+6C	+1C	4E+	1E+	+4C	6E+2C	2E+	5E+3C
Space	342		420			324		318
Hints:								

Reference:

Red colored background part has less LED than the green colored background part.

Green colored background covers the same space as the orange colored background covers.

Orange colored background part and red colored part are not immediate neighbors.

Inference:

Now, we have only those two parts left in which one have 7 LEDs and another have 8 LEDs.

Green colored background part have more LEDs than red colored background part, therefore, Part having green colored background have 8 LEDs.

So, size of green colored background part is:

$$8 \times 42 + 1 \times 36 = 336 + 36 = 372\text{cm.}$$

Size of Red colored background part is:

$$7 \times 42 + 4 \times 36 = 294 + 144 = 438\text{cm.}$$

As space occupied by the part having orange colored back ground is same as that occupied by green colored background, therefore,

No. of LEDs and LCDs in Orange colored background part is,

There are two options for Orange colored background i.e. either it contain 1 LCD or 2 LEDs.

But, as it is given that Red colored background part has less LED than the green colored background part, therefore Green background part must be having 8 LEDs and hence 1 LCD so, Orange background part have 2 LEDs.

No. of LCDs for orange colored background part is:

$$372 - 2 \times 42 = 372 - 84 = 288/36 = 8\text{LCD.}$$

No. of LCDs for blue colored background part is : $420 - 4 \times 42 = 420 - 168 = 252/36 = 7\text{LCD}$ so:

			R			L		
Color	Purple	Green	Blue	White	Red	Black	Orange	Yellow
Number of product	3E + 6C	8E+1C	4E+7C	1E+	7E+4C	6E+2C	2E+8C	5E+3C
Space	342	372	420		438	324	372	318
Hints:								

White colored background is the only left part now,

It must be having 1 LED and 5 LCDs, therefore the space covered by it:

$$1 \times 42 + 5 \times 36 = 42 + 180 = 222\text{cm.}$$

Final arrangement:

			South Facing					
Color	Purple	Green	Blue	White	Red	Black	Orange	Yellow
Number of product	3E+6C	8E+1C	4E+7C	1E+5C	7E+4C	6E+2C	2E+8C	5E+3C
Space	342	372	420	222	438	324	372	318

Answers :

1. Following common explanation, we get
The part which has 5 LCDs covers 222cm space.
Option A, is hence the correct answer.
2. Following common explanation, we get
Yellow is the color of the background which covers space of 318cm.
Option D, is hence the correct answer.
3. Following common explanation, we get
Green colored background part has 1 LCD.
Option C, is hence the correct answer.
4. Following common explanation, we get
Orange colored background part has the maximum number of LCDs.
Option E, is hence the correct answer.
5. Following common explanation, we get
Red doesn't belong to that group as the no. of LEDs + no. of LCDs this color background holds is a prime no.
Option A, is hence the correct answer.



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