

## DI Line Chart Questions for SBI Clerk Mains, IBPS Clerk Mains, RBI Assistant Mains and IBPS RRB Clerk Mains Exams.

DI Line Chart No 47
Directions : Study the following line chart carefully and answer the questions given beside.
The following Graph shows the ratio values of a mixture of Propane and Butane in 5 vessels A , B, C, D, E. (For example Ratio of Propane : Butane in vessel $A$ is $30: 12$ )


1. If equal quantities from Vessel $A, C$ and $E$ are mixed up then what is the final ratio of Propane and Butane in the resultant mixture?
A. $27: 15$
B. $19: 27$
C. $17: 21$
D. $21: 17$
E. $19: 21$
2. If $\mathbf{1 0}$ litre Butane is added to some volume of the mixture from vessel $A$ and then the final ratio of the Propane and Butane becomes 4:3, then what is the initial quantity of the mixture?
A. 35 litres
B. 30 litres
C. 20.5 litres
D. 40 litres
E. 25 litres
3. In what ratio must mixture in the vessel $C$ and $D$ be mixed to get the final ratio 115: 81 of Propane and Butane?
A. $7: 11$
B. $3: 7$
C. $7: 9$
D. 5:7
E. $5: 2$
4. Suppose another vessel F contains initially contains 150 litres of Propane and no Butane, then 15 litres of Propane is removed from the vessel and the same amount of Butane is added then 15 litres of the mixture is removed and then again 15 litres of Butane is added and this process is done one more time. What is the quantity of Propane left in the vessel?
A. 113.25 litres
B. 109.35 litres
C. 111.25 litres
D. 106.35 litres
E. 104.35 litres
5. A shopkeeper sells the solution in vessel $A$ at Rs. 35 per litre and $B$ at Rs. 40 per litre. He sells 42 litres from vessel $A$ and 52 litres from vessel $B$. It is given that the cost price of pure Propane is Rs. 40 per litre \& Butane is available free of cost, then what is the profit made by the shopkeeper?
A. Rs. 1080
B. Rs. 1070
C. Rs. 1090
D. Rs. 1060
E. Rs. 1050

Correct Answers:

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: |
| A | D | E | B | B |

## Explanations :

1. Ratio of Propane and Butane in $A=30: 12=[5: 2] \times 2=10: 4$

Ratio of Propane and Butane in $\mathrm{C}=40: 30=[4: 3] \times 2=8: 6$
Ratio of Propane and Butane in $\mathrm{E}=90: 50=9: 5$
Final ratio of Propane and Butane in the resultant mixture $=[10+8+9]:[4+6+5]=27: 15$
Hence, Option A is correct.
2. Ratio of Propane and Butane in $A=30: 12=5: 2$

Let original volume is X litres .
$\therefore \frac{[\mathrm{X} \times 5 / 7]}{[(\mathrm{X} \times 2 / 7)+10]}=\frac{4}{3}$
On solving this, we get;
$X=40$
Hence, option D is correct.
3. Ratio of Propane and Butane in vessel $C=4: 3$

Ratio of Propane and Butane in vessel $D=5: 3$
Quantity of Propane in vessel $C=\frac{4}{7}$
Quantity of Propane in vessel $D=\frac{5}{8}$
Final Quantity of Propane $=\frac{115}{196}$
By allegation method,


So, ratio $=5: 2$

Hence, option E is correct.
4. The initial volume of Propane in vessel $F=150$ litre

As we know,
Final Pure Propane $=x\left(1-\frac{y}{x}\right)^{n}$

Where $x=150$ (Capacity of the vessel)
$y=15$ (quantity removed)
$n=3$ (number of times the process is done).
Final pure Propane $=150\left(1-\frac{15}{150}\right)^{3}=109.35$ litres

Hence, option B is correct.
5. Total solution in Vessel $A=(30+12)=42$ litre

Total solution in Vessel $B=(32+20)=52$ litre

Selling price of solution in vessel $\mathrm{A}=42 \times 35=$ Rs. 1470
Selling price of solution in vessel $B=52 \times 40=$ Rs. 2080
Total selling price $=$ Rs. 3550

Actual Propane in vessel $A=30$ litre

Actual Propane in vessel $B=32$ litre
Actual cost price of Propane in vessel $A=30 \times 40=$ Rs. 1200

Actual cost price of Propane in vessel $B=32 \times 40=$ Rs. 1280

Total cost price $=$ Rs. 2480
Profit $=$ Rs. $(3550-2480)=$ Rs. 1070
Hence, option B is correct.

# - Smartkeeda <br> <br> Presents <br> <br> Presents <br> Testzone <br> India's least priced Test Series Platform 



