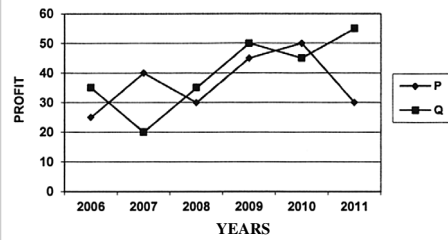


LINE GRAPHS

Directions (Q.1-5): Study the following graph carefully and answer the questions accordingly.

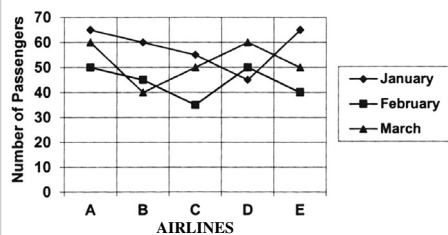
Following graph shows the profit (in lakhs) of two companies P and Q over the years:



- If the Expenditure of Company Q in the year 2009 was Rs.32 lakhs then what was its income in that year?
 - Rs.18 lakhs
 - Rs.14 lakhs
 - Rs.82 lakhs
 - Can't be determined
 - None of these
- What is the percent profit of Company P in the year 2011, if the income of the company was Rs.105 lakhs?
 - 55%
 - 40%
 - 53%
 - 33.33%
 - None of these
- If the Income of Company P in the year 2007 was Rs.115 lakhs, what was the Income of Q in that year?
 - Rs.205 lakhs
 - Rs.125 lakhs
 - Rs.85 lakhs
 - Can't be determined
 - None of these
- In which year was the percent increase in the profit of company P the highest from that of the previous year?
 - 2009
 - 2006
 - 2007
 - 2008
 - 2010
- If the expenditures of Q in 2010 and 2011 were 65 and 90 lakhs respectively. What is the respective ratio of their incomes in those years?
 - 9:11
 - 13:18
 - 22:29
 - 21:28
 - None of these

Directions (Q.6-10): Study the following graph carefully and answer the questions accordingly.

Following line graph gives the number of passengers (in thousands) travelling by different airlines A, B, C, D and E in three months January, February and March.



EXPLANATIONS

- Profit of Q in 2009 = 50, Expenditure = 32
Profit = Income - Expenditure
Income = 50 + 32 = 82 lakhs
- Income = 105 lakhs, Profit in 2011 = 30 lakhs
∴ Expenditure = 105 - 30 = 75
Profit % = $\frac{\text{Profit}}{\text{Expenditure}} \times 100$
 $\Rightarrow \frac{30}{75} \times 100 = 40\%$
- Increment% in profit in
2007 = $\frac{40 - 25}{25} \times 100 = 60\%$
2009 = $\frac{45 - 30}{30} \times 100 = 50\%$
2010 = $\frac{50 - 45}{45} \times 100 = 11 \frac{1}{9}\%$
- Profit of Q in 2010 = 45
Expenditure in 2010 = 65

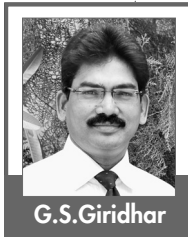
The instructions given in the graph have to be understood carefully to prevent wasting time in calculating data that is not required, and also to find out exactly what is the answer that is sought. Read the data very carefully, as the smallest detail may change the meaning of the question completely.



Number of trees planted by..

SBI Probationary Officers
Data Interpretation

- What is the respective ratio of the total number of passengers travelling by Airline B to that of Airline E during three months?
 - 15:7
 - 17:19
 - 29:31
 - 23:25
 - None of these
- Which of the following Airlines has the highest number of passengers during three months?
 - A
 - E
 - C
 - D
 - None of these
- What is the difference between the average number of passengers travelling in the month of March and the average number of passengers travelling in the month of January by all the Airlines together?
 - 60
 - 800
 - 12000
 - 5000
 - None of these
- The number of passengers travelling by Airline B in the month of February is approximately what percent of the passengers travelling by other Airlines in the same month?
 - 15%
 - 60%
 - 30%
 - 25%
 - 37.5%
- What is the total number of passengers travelling by various Airlines in the span of three months?
 - 710000
 - 770000
 - 750000
 - 715000
 - None of these

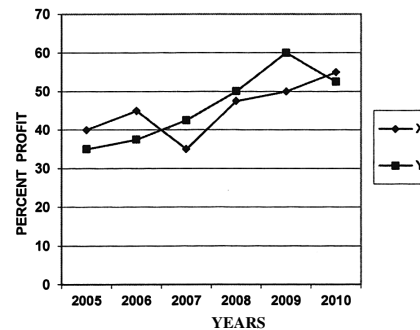


G.S.Giridhar

Directions (Q:11-15): Study the following graph carefully to answer the questions:

Percent profit earned by two companies over the years

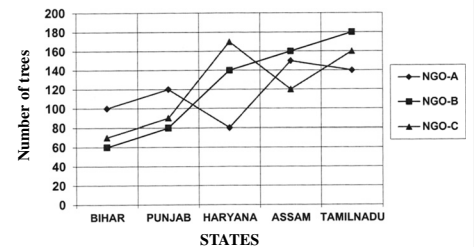
$$\text{Percent Profit} = \frac{(\text{Income} - \text{Expenditure})}{\text{Expenditure}} \times 100$$



- If the income of company X in the year 2006 was Rs.6.425 lakhs, what was its expenditure in that year?
 - 4.7 lakhs
 - 5.2 lakhs
 - 4.5 lakhs
 - 3.8 lakhs
 - None of these
- If the expenditure of company X in the year 2005 was Rs.3.6 lakhs, what was the amount of profit earned by it in that year?
 - 2.52 lakhs
 - 2.46 lakhs
 - 1.44 lakhs
 - 1.31 lakhs
 - None of these
- What is the approximate average percent profit earned by company X over all the years together?
 - 57
 - 36
 - 41
 - 53
 - 45
- If in the year 2009 incomes of both the companies X and Y were the same, what was the respective ratio of their expenditures in that year?
 - 7 : 5
 - 16 : 15
 - 23 : 211
 - Cannot be determined
 - None of these
- What is the percentage increase in percent profit of company Y in the year 2008 from the previous year? (rounded off to two digits after decimal)
 - 17.65
 - 19.25
 - 16.55
 - 15.75
 - None of these

Directions (Q: 16-20): Study the following graph carefully to answer the questions that follow:

Number of trees planted by three different NGOs in five different States.



- In which state was the total number of trees planted by NGO-A and NGO-B together second lowest?
 - Bihar
 - Punjab
 - Haryana
 - Assam
 - Tamilnadu
- What was the difference between the trees planted by NGO-A in Haryana and the number of trees planted by NGO-C in Tamilnadu?
 - 90
 - 60
 - 120
 - 100
 - None of these
- What was the approximate average number of trees planted in Haryana by all the NGOs together?
 - 420
 - 140
 - 120
 - 390
 - 130
- Total number of trees planted by NGO-A and NGO-B together in Bihar was approximately what percent of the total number of trees planted by NGO-B together in Punjab?
 - 85
 - 90
 - 95
 - 110
 - 105
- What was the respective ratio between the number of trees planted by NGO-B in Tamilnadu, number of trees planted by NGO-C in Assam and the number of trees planted by NGO-A in Assam?
 - 5 : 3 : 6
 - 5 : 6 : 3
 - 6 : 4 : 5
 - 6 : 5 : 3
 - None of these

Answers

1-3	5-3	9-4	13-5	17-5
2-2	6-3	10-2	14-2	18-5
3-4	7-1	11-5	15-1	19-3
4-3	8-5	12-3	16-2	20-3.

(Writer - Director, RACE Institute, Hyderabad)

- Income of Q in 2010 = 65+45 = 110 lakhs
Profit of Q in 2011 = 55
Expenditure = 90
∴ Income of Q in 2011 = 90 + 55 = 145 lakhs
Required ratio = 110 : 145 = 22 : 29
- $\frac{40 + 45 + 60}{40 + 50 + 65} = \frac{145}{155} = 29 : 31$
- $\frac{60 + 40 + 50 + 60 + 50}{5} - \frac{65 + 60 + 55 + 45 + 65}{5}$
 $\Rightarrow \frac{260}{5} - \frac{290}{5} \Rightarrow \frac{30}{5} = 6$ thousands
- $\frac{45}{50 + 35 + 50 + 40} \times 100 = 25.7\%$
- $45 = \left[\frac{6.425 - E}{E} \right] \times 100$
 $\Rightarrow 145E = 642.5 \Rightarrow E = \frac{642.5}{145} = 4.43$ lakhs

- Income = $\frac{140}{100} \times 3.6 = 5.04$
∴ Profit = 5.04 - 3.6 = 1.44 lakhs
- Average percent profit earned by company A
 $\frac{40 + 45 + 35 + 47.5 + 50 + 55}{6} = \frac{272.5}{6} = 45$
- Let the incomes of X & Y be 'I' and Expenditure of X be E₁, Y be E₂
 $50 = \left[\frac{I - E_1}{E_1} \right] \times 100 \Rightarrow I = \frac{150E_1}{100}$
 $60 = \left[\frac{I - E_2}{E_2} \right] \times 100 \Rightarrow I = \frac{160E_2}{100}$
Since incomes are same, $\frac{150E_1}{100} = \frac{160E_2}{100}$
 $\Rightarrow \frac{E_1}{E_2} = \frac{160}{150} = E_1 : E_2 = 16 : 15$
- Required percentage = $\frac{50 - 425}{42.5} \times 100 = 17.65$
- Number of trees planted by NGO-A and NGO-B together :
Bihar $\Rightarrow 100 + 60 = 160$
Punjab $\Rightarrow 120 + 80 = 200$
Haryana $\Rightarrow 140 + 80 = 220$
Assam $\Rightarrow 160 + 150 = 310$
Tamilnadu $\Rightarrow 180 + 140 = 320$
- Required difference = 160 - 80 = 80
- Required average = $\frac{165 + 140 + 80}{3} = \frac{385}{3} = 128.3$
- Required percentage = $\frac{(100 + 60)}{(90 + 80)} \times 100 = \frac{160}{170} \times 100 \approx 95$
- Required ratio = 180 : 120 : 150 = 6 : 4 : 5