

Q1. The population of a town increases by 5% annually. If its population in 2001 was 1,38,915, what it was in 1998? [Level 1, Wipro]

- a. 1,00,000 b. 1,08,000 c. 1, 10,000 d. 1,20,000

Ans: d

Soln: Population in 2001 = population in 1998 $(1 + (5/100))^3$

Q2. A supermarket offers the following discount schemes for buyers.

I. Two successive discounts of 25% and 15%

II. Successive discounts of 35% and 5%

III. A discount of 38%

Which offer is better for the customer?

[level 2, Accenture]

- 1) Either I or III 2) Only I 3) Only II 4) Only III

Ans: 3

Solution

I. For the first scheme, two successive discounts of 25% and 15%:

So, the equivalent discount = $25 + 15 - (25 \times 15)/100 = 36.25\%$

II. For the second scheme, successive discounts of 35% and 5%:

So, the equivalent discount = $35 + 5 - (35 \times 5)/100 = 38.25\%$

III. The third scheme directly offers a discount of 38%.

The second discount is better for the customer.

Hence, the correct answer is Only II.

Q3. There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest of Rs. 12,000 after 3 years at the same rate? [Level 2, Wipro]

- A. Rs. 2160 B. Rs. 3120 C. Rs. 3972 D. Rs. 6240

Ans: C

Solution:

Rate of interest = $60\%/6 = 10\%$

Compound interest after 3 years = $12000(1 + 10/100)^3 - 12000$

= $12000(1331-1000)/1000 = 12 \times 331 = 3972$

Q4. The ratio of water and milk in a 30 litre mixture is 7: 3. Find the quantity of water to be added to the mixture in order to make this ratio 6: 1. [Level 2, Wipro]

- A. 30 B. 32 C. 33 D. 35

Ans: C

Solution:

Water = $7/10 (30) = 21$ litres

Milk = 9 litres

So, $\frac{21+x}{9} = \frac{6}{1}$

On solving, x = 33 litres

Q5. Two people A and B are at a distance of 220 km from each other at 10:30 AM. After 30 minutes, A starts moving towards B at a speed of 40 km/hr while at 12 PM, B starts moving away from A at a speed of 30 km/hr. At what time will they meet on the next day? [Level 2, TCS]

- 1) 7:00 AM 2) 4:00 AM 3) 5:30 AM 4) 6:00 AM

Ans: 4

Solution

Distance between A and B = 220 km

A started at 11:00 AM at a speed of 40 km/hr.

Distance covered by A at 12:00 PM = $40 \times 1 = 40$ km

Remaining distance = $220 - 40 = 180$

Their relative speed = $40 - 30 = 10$ km/hr

Time = 18 hours

Thus, they will meet at 12:00 PM + 18 hours = 6:00 AM next day

Hence, the correct answer is 6:00 AM.

Q6. A train of length 300 metres crosses a tree in 20 seconds and crosses another train of the same length travelling in the opposite direction in 25 seconds. What is the speed of the second train?

[Level 2, Wipro]

1) 10 m/s

2) 12 m/s

3) 15 m/s

4) 9 m/s

Ans: 4

Solution

Given,

Length of the train = 300 m

Time to cross a tree = 20 sec

Time to cross another train = 25 sec

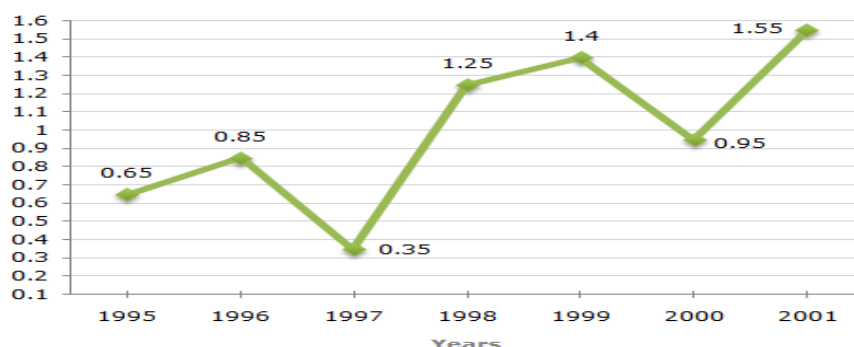
Speed of first train = $300 / 20 = 15$ m/s

Relative speed while crossing the second train = $(300 + 300) / 25 = 24$ m/s

Speed of the second train = Relative speed – Speed of the first train = $24 - 15 = 9$ m/s

Q7. Direction: The following line graph gives the ratio of the amounts of imports by a company to the amount of exports from that company over the period from 1995 to 2001. [level 2, Wirpo. TechM]

Ratio of Value of Imports to Exports by a Company Over the Years.



If the imports in 1998 was Rs. 250 crores and the total exports in the years 1998 and 1999 together was Rs. 500 crores, then the imports in 1999 was?

a. Rs. 250 crores

b. Rs. 300 crores

c. Rs. 357 crores

d. Rs. 420 crores

Ans: D

Solution:

The ratio of imports to exports for the years 1998 and 1999 are 1.25 and 1.40 respectively.

Let the exports in the year 1998 = Rs. x crores.

Then, the exports in the year 1999 = Rs. $(500 - x)$ crores.

$$\therefore 1.25 = \frac{250}{x} \Rightarrow x = \frac{250}{1.25} = 200 \quad [\text{Using ratio for 1998}]$$

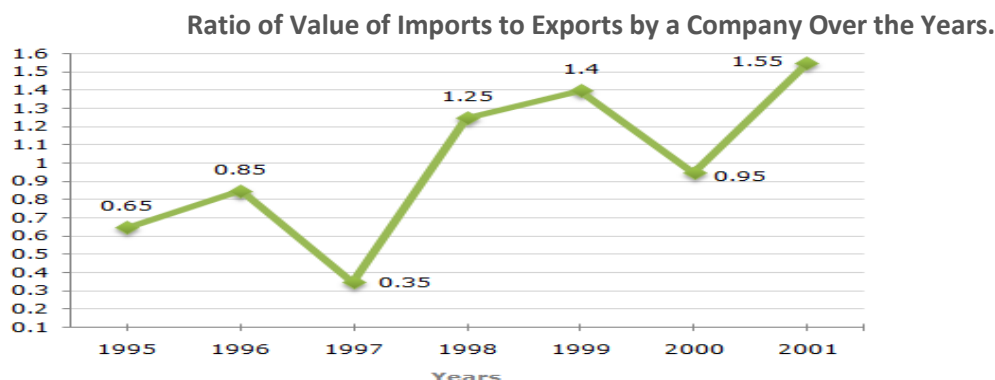
Thus, the exports in the year 1999 = Rs. $(500 - 200)$ crores = Rs. 300 crores.

Let the imports in the year 1999 = Rs. y crores.

$$\text{Then, } 1.40 = \frac{y}{300} \Rightarrow y = (300 \times 1.40) = 420.$$

∴ Imports in the year 1999 = Rs. 420 crores.

Q8. Direction: The following line graph gives the ratio of the amounts of imports by a company to the amount of exports from that company over the period from 1995 to 2001.



The imports were minimum proportionate to the exports of the company in the year?

- a.1995 b.1996 c.1997 d.2000

Ans: C

Solution:

The imports are minimum proportionate to the exports implies that the ratio of the value of imports to exports has the minimum value.

Now, this ratio has a minimum value 0.35 in 1997, i.e., the imports are minimum proportionate to the exports in 1997.

Q9. Direction: The following line graph gives the ratio of the amounts of imports by a company to the amount of exports from that company over the period from 1995 to 2001. [level 2, Wirpo. TechM]



What was the percentage increase in imports from 1997 to 1998?

- a. 72 b.56 c. 28 d. Data inadequate

Ans: D

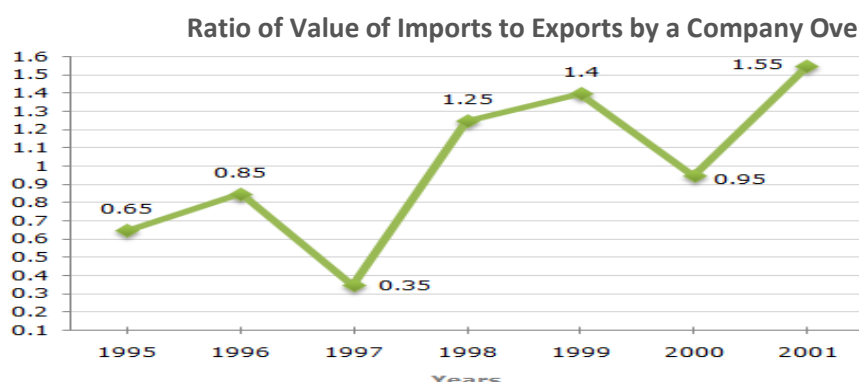
Solution:

The graph gives only the ratio of imports to exports for different years. To find the percentage increase in imports from 1997 to 1998, we require more details such as the value of imports or exports during these years.

Hence, the data is inadequate to answer this question.

Q10. Direction: The following line graph gives the ratio of the amounts of imports by a company to the amount of exports from that company over the period from 1995 to 2001. [level 2,

Wirpo. TechM]



If the imports of the company in 1996 was Rs. 272 crores, the exports from the company in 1996 was ?

- a. Rs. 370 crores b. Rs. 320 crores c. Rs. 280 crores d. Rs. 275 crores

Ans: B

Solution:

Ratio of imports to exports in the year 1996 = 0.85.

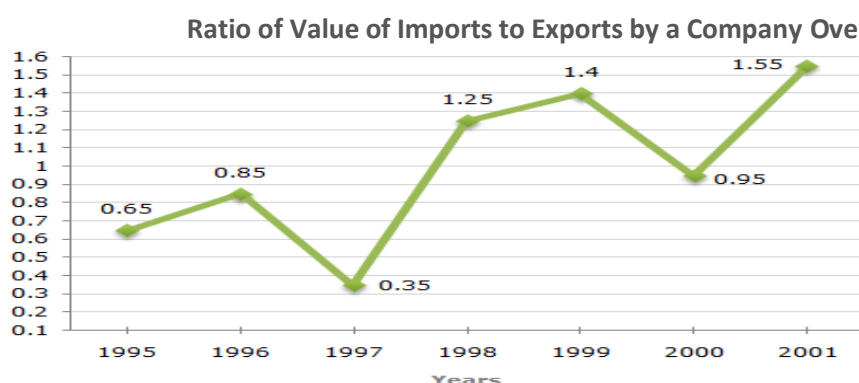
Let the exports in 1996 = Rs. x crores.

$$\text{Then, } \frac{272}{x} = 0.85 \Rightarrow x = \frac{272}{0.85} = 320.$$

∴ Exports in 1996 = Rs. 320 crores.

Q11. Direction: The following line graph gives the ratio of the amounts of imports by a company to the amount of exports from that company over the period from 1995 to 2001. [level 2,

Wirpo. TechM]



In how many of the given years were the exports more than the imports?

- a.1 b.2 c.3 d.4

Ans: D

Solution:

The exports are more than the imports imply that the ratio of value of imports to exports is less than 1.

Now, this ratio is less than 1 in years 1995, 1996, 1997 and 2000.

Thus, there are four such years.

Q12. A liquid "P" is $1\frac{3}{7}$ times as heavy as water and water is $1\frac{2}{5}$ times as heavy as another liquid "Q". The amount of liquid "P" that must be mix with 7 liters of the liquid "Q" so that the mixture may weigh as much as an equal volume of water will be [Level 2, TCS]

- A. 7 B. $5\frac{1}{6}$ C. 5 D. $4\frac{2}{3}$

Ans: D

Solution:

Let x litres of liquid P be mixed to 7 litres of liquid Q.

According to the question,

$$\begin{aligned}
 x \times \frac{10}{7} + \frac{5}{7} \times 7 &= x + 7 \\
 \Rightarrow 10x + 35 &= 7x + 49 \\
 \Rightarrow 3x &= 14 \\
 \Rightarrow x &= \frac{14}{3} = 4\frac{2}{3} \text{ litres}
 \end{aligned}$$

Q13. In a hostel of 12 boys and some girls, an average consumption of rice per month is 12 kg, while the Average consumption for boys is 16 kg per head and for girls 8 kg per head. The number of girls in the hostel? [Level 2, Infosys]

- A. 11 B. 12 C. 12 D. 13

Ans: C

Solution:

Let the girls are y.

Then according to the question,

$$12 \times 16 + y \times 8 = 12(12 + y)$$

Solve for y.

Q14. A pipe fills a tank in X hrs, another make it empty in Y hrs. If $Y > X$, in what time they will fill it together? [Level 2, Accenture]

- A. $XY/(Y-X)$ B. $XY/(X-Y)$ C. $(Y-X)/XY$ D. $(X+Y)/XY$

Ans: A

Solution:

$$\text{Required time} = 1/(1/X - 1/Y) = XY/(Y-X)$$

Q15. Efficiency of two persons A and B are in the ratio of 2: 3 respectively. if A can do half of the work in 10 days, in how many days the $\frac{3}{4}$ th of the work will be completed if both work together?

[Level 2, Accenture]

- A. 10 days B. 9 days C. 12 days D. None of these

Ans: D

Solution:

A will do in 10 days = $2 \times 10 = 20$ units which is 50% of the total work

So, total Work = 40 units

Both will do 5 units of work in a day.

$\frac{3}{4}$ th of the work i.e. 30 units will be done in $30/5 = 6$ days.