

Cognizant Aptitude Questions and Answers with Explanation

1. If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance traveled by him is:

- A. 70 km
- B. 80 km
- C. 50 km
- D. 56 km

Answer - C. 50 km

Explanation:

Let us assume, the actual distance traveled be x km.

Then, $x/10 = (x + 20)/14$

$14x = 10x + 200$

$4x = 200$

$x = 50$ km.

2. Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour?

- A. 10
- B. 12
- C. 20
- D. 9

Answer - A. 10

Explanation:

Due to stoppages, it covers 9 km less.

Time taken to cover 9 km = $(9/54) \times 60$ mins = 10 mins

3. The distance between two cities P and Q is 300km. A train starts from station P at 10 am with speed 80 km/hr towards Q. Another train starts from Q towards P with speed 40km/hr at 11 am. At what time do they meet.

- A. 12: 50 pm
- B. 1 pm
- C. 12: 20 pm
- D. 12: 40 pm

Answer – A. 12.50 pm

Explanation:

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First train starts at 10 am so in one hour it covers 80 km in one hour. Now distance b/w P and Q is 220. Suppose at some 'x' km they meet. So,

$$x/80 = (220-x)/40$$

$$x = 440/3.$$

The time after which they meet = $(440/3)/80 = 11/6$ i.e = 1hr 50 min.

Therefore, they will meet at 12: 50 pm

4. Two cities A and B are at a distance of 60 km from each other. Two persons P and Q start from the First city at a speed of 10km/hr and 5km/hr respectively. P reached the second city B and returns back and meets Q at Y. Find the distance between A and Y.

- A. 40 km
- B. 50 km
- C. 30 km
- D. 55 km

Answer – A. 40 km

Explanation:

Time taken by P to reach city B is 6hr. In 6 hr, distance covered by Q is 30km. Now at some x distance, they will meet. So

$$x/5 = (30-x)/10. X= 10.$$

So distance b/w A and Y is $30+10 = 40$ km

Therefore, the distance between A and Y is 40 km.

5. The CP of Desk is Rs.2000. A Salesman wants to make 15% profit by selling it. At the time of sale, he declares a discount of 10% on MP. The Marked price is?

- A. Rs. 2554
- B. Rs. 2556
- C. Rs. 2550
- D. Rs. 2552

Answer - B. RS. 2556

Explanation:

$$90x/100 = 2000*(115/100)$$

$$X = 2000*115/90 = 2555.5 = 2556$$

Therefore, the market price is Rs. 2556.

6. A boy bought 2 items for Rs.7500. One item he sells at a profit of 16% and another item at 14% loss. In this, the boy makes neither any profit nor any loss. What is the difference between the SP of 2 items?

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- A. 600
- B. 620
- C. 602
- D. 610

Answer - B. 620

Explanation:

$$116X/100 + (7500-x)86/100 = 7500$$

$$116x-86x-645000 = 750000$$

$$X = 3500, 7500 - 3500 = 4000$$

$$(3500*116)/100 - (4000*86)/100 = 620$$

7. A Shopkeeper bought 30 kg of rice at the rate of Rs. 40 per kg. He sold 40% of the total quantity at the rate of Rs. 50 per kg. At what price per kg should he sell the remaining quantity to make a 25% overall profit?

- A. Rs.50
- B. Rs.40
- C. Rs.30
- D. Rs.54

Answer – A. Rs.50

Explanation:

$$\text{Total CP of Rice} = 30 * 40 = 1200$$

$$40\% \text{ of Total Quantity} = 40\% \text{ of } 30 = 12$$

$$SP = 12*50 = 600$$

$$SP = 1200 * 125/100 = 1500$$

$$SP \text{ of Remaining Quantity} = 1500 - 600 = 900$$

$$\text{Remaining Quantity} = 18\text{kg}$$

$$\text{Rice per Kg} = 900/18 = \text{Rs. } 50$$

8. Prakash sold a machine to Swapna at a profit of 30%. Swapna sold this machine to Ajay at a loss of 20%. If Prakash paid Rs.5000 for this machine, then find the cost price of machine for Ajay?

- A. 6200
- B. 5200
- C. 4800
- D. 4750

Answer – B. 5200

Explanation:

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$$R1 = 30\% \quad R2 = 20\%$$

$$5000 * 130/100 * 80/100 = \text{Rs. } 5200$$

9. A man borrows Rs 4000 at 8% compound interest for 3 years. At the end of each year, he paid Rs 500. How much amount should he pay at the end of the 3rd year to clear the debt?

- A. Rs 4254.5
- B. Rs 3465.2
- C. Rs 3485.2
- D. Rs 3915.6

Answer - D. Rs 3915.6

Explanation:

$$\text{Amount after 1 yr} = 4000[1 + 8/100] = 4320$$

$$\text{Paid 500, so } P = 4320 - 500 = 3820$$

$$\text{Amount after 2nd yr} = 3820[1 + 8/100] = 4125.6$$

$$\text{So } P = 4125.6 - 500 = 3625.6$$

$$\text{Amount after 3rd yr} = 3625.6[1 + 8/100] = 3915.6$$

10. A person earns an interest of 240 on investing certain amount at Simple interest for 2 years at 5 percent amount. If the rate of interest is compounded annually then how much more interest will be gain by the person at same rate of interest and on the same sum.

- A. 8
- B. 12
- C. 10
- D. 6

Answer – D. 6

Explanation:

$$240 = P*(5/100)*2, \quad P = 2400$$

$$CI = 2400(1+5/100)^2 - 2400 = 246$$

$$\text{So, } 246 - 240 = 6$$

11. A sum of rupees 4420 is to be divided between Ramesh and Suresh in such a way that after 5 years and 7 years respectively the amount they get is equal. The rate of interest is 10 percent. Find the share of Ramesh and Suresh

- A. 2000, 2420

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- B. 2420, 2000
- C. 2480, 2420
- D. 2210, 2210

Answer – B. 2420, 2000

Explanation:

Let the share of Ramesh and Suresh be R and S

$$R \cdot (1 + 10/100)^5 = (4420 - R) \cdot (1 + 10/100)^7$$

We get $R = 2420$, so $S = 2000$

12. The average price of 10 books is Rs. 12 while the average price of 8 of these books is Rs. 11.75. Of the remaining two books, if the price of one book is 60% more than the price of the other, what is the price of each of these two books?

- A. Rs 12 and Rs 24
- B. Rs 24 and Rs 18
- C. Rs 28 and Rs 12
- D. Rs 10 and Rs 16

Answer – D. Rs 10 and Rs 16

Explanation:

Given that, Total price of the two books = Rs. $[(12 \times 10) - (11.75 \times 8)] = \text{Rs. } (120 - 94) = \text{Rs. } 26$

Let the price of one book be Rs. x

Then, the price of another book = Rs. $(x + 60\% \text{ of } x) = x + (3/5)x = (8/5)x$

so, $x + (8/5)x = 26$, $x = 10$

The prices of the two books are Rs. 10 and Rs. 16

13. The average of 11 results is 50. If the average of the first 6 results is 49 and that of last 6 is 52, find the sixth result?

- A. 65
- B. 62
- C. 55
- D. 56

Answer – D. 56

Explanation:

The total of 11 results = $11 \times 50 = 550$

The total of first 6 results = $6 \times 49 = 294$

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The total of last 6 results = $6 \times 52 = 312$

The sixth result is common to both:

Sixth result = $294 + 312 - 550 = 56$

14. A mixture contains A and B in the ratio 5: 9. 14 liters of this mixture is taken out and 14 liters of B is poured in. Now the ratio of A to B becomes 2: 5. Find the amount of B originally present in the mixture.

- A. 45 liters
- B. 55 liters
- C. 40 liters
- D. 25 liters

Answer - A. 45 liters

Explanation:

Total = $5x+9x+14 = 14x+14$

So $5x/9x+14 = 2/5$

Solve, $x = 4$

15. Arun and Vinod established a firm together. Arun 's investment was thrice that of Vinod. Arun also kept the investment for twice as much time as Vinod. If Vinod got a profit of 4000, what was the total profit?

- A. 30,000
- B. 28,000
- C. 40,000
- D.45,000

Answer - B. 28,000

Explanation:

Let us assume, Vinod 's investment= X

Then, Arun investment= 3X

lets time for Vinod = t

Then, Arun time= 2t

Now, Arun: Vinod

$3X \times 3t : X \times t$

6:1

Vinod's share = $1/7 \times \text{total} = 4000$

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Therefore, the total profit=28,000

16. Avinash being the sleeping partner receives $\frac{1}{10}$ th of profit and the remaining is divided between Vamsi and Ramu in the ratio of 1:2. If the difference between the profit shares of Avinash and Vamsi is Rs.2000.What is Vamsi's share in Rs.?

- A.Rs.1800
- B.Rs.2200
- C.Rs.1200
- D.Rs.1500

Answer - C. Rs. 1200

Explanation:

let total profit =x

Avinash's share in profit is $(\frac{1}{10})x$

remaining profit = $x - (\frac{1}{10})x = (\frac{9}{10})x$

Vamsi's share= $\frac{1}{3} \times (\frac{9}{10})x = (\frac{3}{10})x$

Ramu's share= $\frac{2}{3} \times (\frac{9}{10})x = (\frac{6}{10})x$

Avinash – Ramu= $(\frac{6}{10})x - (\frac{1}{10})x = (\frac{5}{10})x$

$\frac{5}{10}x = 2,000$ so, $x = 4000$

Vamsi's share= $(\frac{3}{10}) \times 4000 = 1200$

So total = $14 \times 4 + 14 = 70$ litres

So B = $\frac{9}{(5+9)} \times 70 = 45$