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1. A starts business with Rs. 35,000 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2:3. What is B's contribution in the capital?

- A) Rs. 7500
- B) Rs. 8000
- C) Rs. 8500
- D) Rs. 9000

Answer: D

Explanation:

Ratio in which profit is to be divided = 2 : 3

Assume that B's contribution to the capital = b

$$\Rightarrow 3500 \times 12 : b \times 7 = 2 : 3$$

$$\Rightarrow 3500 \times 12/7 b = 2/3$$

$$\Rightarrow b = (3500 \times 12 \times 3)/(2 \times 7) = 500 \times 6 \times 3 = 9000$$

2. Anand and Deepak started a business investing Rs. 22,500 and Rs.35,000 respectively. Out of a total profit of Rs.13,800, Deepak's share is \_\_\_\_\_

- A) Rs.5,400
- B) Rs.7,200
- C) Rs.8,400
- D) Rs.9,400

Answer: A

Explanation:

Ratio of their investments = 22500 : 35000 = 9 : 14

$$\text{So Deepak's share} = \frac{9}{23} \times 13800 = \text{Rs.5,400}$$

3. Narasimha, Madhu and pavan started a business by investing Rs.1,20,000, Rs.1,35,000 and Rs 1, 50,000 respectively. Find the share of Pavan, out of an annual profit of Rs.56,700.

- A) Rs.16,800
- B) Rs.18,900
- C) Rs.21,000
- D) none

Answer: C

Explanation:

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Ratio of their investments = 120000 : 135000 : 150000 = 8 : 9 : 10

Share of Pavan =  $1027 \times 56700 = 21,000$

4. Out of four numbers ,the average of first three is 16 and that of the last three is 15. If the last number is 18,the first number is :

A) 20

B) 21

C) 23

D) 25

Answer: B

Explanation:

Let the numbers be a,b,c,d

Given,  $a + b + c = 48$ ,  $b + c + d = 45$

Now,  $d = 18$

thus,  $b + c + 18 = 45 \Rightarrow b + c = 27$

Putting the value of  $b + c$  in  $a + b + c = 48$

$a + 27 = 48 \Rightarrow a = 21$

5. A batsman makes a score of 87 runs in the 17th inning and thus increases his average by 3 . Find his average after 17th inning.

A) 39

B) 38

C) 38.5

D) 39.5

Answer: A

Explanation:

Consider the avg for first 16 innings is x.

Then total runs scored till 16 innings is  $16x$ .

Total runs after 17 innings =  $16x + 87$ .

Thus,  $16x + 87 = 17(x + 3) \Rightarrow x = 36$

So his average after 17 innings = 39.

6. Three years ago , the average age of A, B and C was 27 years and that of B and C 5 years ago was 20

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years. A's present age is :

A) 30 yrs

B) 35 yrs

C) 40 yrs

D) 48 yrs

Answer: C

Explanation:

Sum of the present ages of A, B and C =  $(27 \times 3 + 3 \times 3)$  years = 90 years.

Sum of the present ages of B and C =  $(20 \times 2 + 5 \times 2)$  years = 50 years.

A's present age =  $90 - 50 = 40$  years.

7. The average of six numbers is 30. If the average of first four is 25 and that of last three is 35, the fourth number is :

A) 25

B) 30

C) 35

D) 40

Answer: A

Explanation:

Let the six numbers be, a, b, c, d, e, f.

$$a + b + c + d + e + f = 30 \times 6 = 180 \text{ ---- (1)}$$

$$a + b + c + d = 25 \times 4 = 100 \text{ ---- (2)}$$

$$d + e + f = 35 \times 3 = 105 \text{ ---- (3)}$$

Add 2nd and 3rd equations and subtract 1st equation from this.

$$d = 25$$

8. A and B are partners in a business. A contributes  $\frac{1}{4}$  of the capital for 15 months and B received  $\frac{2}{3}$  of the profit . For how long B's money was used.

A) 6 months

B) 9 months

C) 10 months

D) 1 year

Answer: C

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Explanation:

B received  $\frac{2}{3}$  of the profit  $\Rightarrow$  Their profits ratio = A : B = 1 : 2

Let the total capital = 4 units

Then A's capital = 1

B's capital = 3

Assume B's money was used for b months

Then A : B =  $1 \times 15$  :  $3 \times b$  = 1 : 2

$$\Rightarrow 15 : 3b = 1 : 2$$

$$\Rightarrow 15 \cdot 2 = 3b$$

$$\Rightarrow b = 10$$

9. At an election a candidate who gets 84% of the votes is elected by a majority of 476 votes. What is the total number of votes polled?

A) 672

B) 700

C) 749

D) 848

Answer: B

Explanation:

Let the total votes are  $100x$ . Then winning candidate got  $84x$ , and losing candidate got  $16x$ .

$$\Rightarrow 84x - 16x = 476$$

$$\Rightarrow 68x = 476$$

$$\Rightarrow x = 7$$

Total votes are 700.

10. A man buys a cycle for Rs.1400 and sells it at loss of 15%. What is the selling price of the cycle?

A) Rs.1090

B) Rs.1160

C) Rs.1202

D) Rs.1190

Answer: D

Explanation:

$$S.P = 85\% \text{ of Rs.1400} \Rightarrow \text{Rs.}(85 \times 1400) = \text{Rs.1190}.$$

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11. A shopkeeper purchased 70 kg of potatoes for Rs.420 and sold the whole lot at the rate of Rs 6.50 per kg .What will be his gain percent?

- A)  $4 \frac{1}{6} \%$
- B)  $6 \frac{1}{4} \%$
- C)  $8 \frac{1}{3} \%$
- D) 20%

Answer: C

Explanation:

Price per 1 kg =  $\frac{420}{70}$  = Rs.6.

Profit per 1 kg = Rs.6.5 – Rs.6 = Rs.0.5

Profit for 70 kg =  $0.5 \times 70$  = Rs.35

Gain % =  $\frac{35}{420} \times 100$  = 8.33% =  $8 \frac{1}{3}$

12. By selling 300 apples a seller gains the selling price of 60 apples. The gain percent of the seller is

- A) 200
- B) 20%
- C) 25%
- D)  $16 \frac{2}{3}\%$

Answer: C

Explanation:

We know that  $SP - CP = \text{Profit}$

$\Rightarrow 300SP - 300CP = 60SP$

$\Rightarrow 240SP = 300CP$

$\Rightarrow \frac{SP}{CP} = \frac{300 \times 240}{300 \times 240} = 54$

Let  $SP = 5$ , and  $CP = 4$

So profit percentage =  $\frac{14}{56} \times 100 = 25\%$

13. The average monthly salary of 8 workers and one supervisor in a factory was \$430. When the supervisor, whose salary was \$870 per month, retired, a new person was appointed and then the average salary of 9 people was \$400 per month. The salary of the new supervisor is:

- A. \$700
- B. \$600

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C. \$430

D. \$400

Answer: B

Explanation:

Total salary of 8 workers and supervisor together =  $9 \times 430 = 3870$

Now total salary of 8 workers =  $3870 - 870 = 3000$

Total salary of 9 workers including the new supervisor =  $9 \times 400 = 3600$

Salary of the new supervisor =  $3600 - 3000 = 600$

14. The average of the first five prime numbers greater than 20 is:

A. 32.20

B. 31.00

C. 31.01

D. 32.00

Answer: A

Explanation:

Required prime numbers are 23, 29, 31, 37, 41.

Average will be  $(23 + 29 + 31 + 37 + 41)/5 = 32.20$

15. The average score of 35 students in a class is 37. If every student is given 3 grace marks, the new average of the class is:

A. 45

B. 34

C. 43

D. 40

E. None of these

Answer: D

Explanation:

Average score = 37

Grace mark 3 is given to 35 student then its average will be 3.

Hence new average =  $37 + 3 = 40$

16. The average age of a group of 10 students is 14 years. If 5 more students join the group, the average age

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rises by 1 year. The average age of the new students is:

- A. 15 years
- B. 17 years
- C. 16 years
- D. 18 years
- E. None of these

Answer: D

Explanation:

Total age of the 10 students =  $10 \times 14 = 140$

Total age of 15 students including the newly joined 5 students =  $15 \times 15 = 225$

Total age of the new students =  $225 - 140 = 85$

Average age =  $85/5 = 17$  years

17. It rained as much as on Wednesday as on all the other days of the week combined. If the average rainfall for the whole week was 3 cms, How much did it rain on Wednesday?

- A. 3 cms
- B. 10.5 cms
- C. 15 cms
- D. 2.62 cms
- E. 4.5 cms

Answer: B

Explanation:

Let the rainfall on wednesday =  $6x$ .

□ Rainfall on the remaining days =  $6x$

Given,

$$(6x + 6x)/7 = 3$$

$$\Rightarrow 12x = 21$$

$$\Rightarrow 6x = 10.5$$