

1. Rs. 7,500 is borrowed at C.I. at the rate of 2% for the first year, 4% for the second year and 5% for the third year. The amount to be paid after 3 years will be

- (a) 8235.00
- (b) 8432.00
- (c) 8520.20
- (d) 8353.80

Answer: d

Explanation:

$$\text{Amount} = P (1 + r_1/100) (1 + r_2/100) (1 + r_3/100) = \text{Rs. } 8353.80$$

2. If $a : 5 = b : 7 = c : 8$, then $(a + b + c)/a$ is equal to

- (a) 2
- (b) 4
- (c) 7
- (d) $1/4$

Answer: b

Explanation:

Given, $a : 5 = b : 7 = c : 8$

Let $a/5 = b/7 = c/8 = k$

Then, $a = 5k, b = 7k, c = 8k$

Now, $(a + b + c)/a = k(5 + 7 + 8)/5k = 4$

3. P, Q, R are employed to do work for Rs. 5750. P and Q together finished $19/23$ of work and Q and R together finished $8/23$ of work. The wage of Q, in rupees, is:

- (a) 2850
- (b) 3750
- (c) 2750
- (d) 1000

Answer: d

Explanation:

Work done by Q = $19/23 + 8/23 - 1 = 4/23$

We know wage of Q = $4/23 \times 5750$

= Rs. 1000

4. 4, 24, 120, 480, 1440, 2880, ?

- (a) 3600
- (b) 4800
- (c) 2880
- (d) 5760

Answer: c

Explanation:

The terms in the question are multiplied by 6, 5, 4, 3 and so on.

5. 11, 23, 48, 99, 202, 409, ?

- (a) 818
- (b) 820
- (c) 824
- (d) 832

Answer: c

Explanation:

$23 = 11 \times 2 + 1$; $48 = 23 \times 2 + 2$; $99 = 48 \times 2 + 3$; $202 = 99 \times 2 + 4$; and so on.

6. Two trains of equal lengths are running on parallel lines in the same directions at the rate of 92 km/h and 72 km/h respectively. The faster train passes the slower train in 54 seconds. The length of each train is

- (a) 500 m.
- (b) 180 m.
- (c) 150 m.
- (d) 240 m.

Answer: c

Explanation:

Speed of faster train relative to slower train

$$= (92 - 72) \text{ km/h} = 20 \text{ km/h}$$

$$= 20 \times (5/18) = 50/9 \text{ m/s}$$

$$\text{Distance covered in 54 seconds} = (50/9) \times 54 \text{ m} = 300 \text{ m}$$

$$2 \times \text{length of each train} = 300 \text{ m}$$

Length of one train = 150 m

7. 11, 17, 23, 31, 41, 47, ?

(a) 51

(b) 59

(c) 61

(d) 67

Answer: b

Explanation:

All numbers are prime numbers with one prime number missing between any pair of consecutive terms. Length of each train = 150 m

8. A boy and a girl together fill a cistern with water. The boy pours 4 litres of water every 3 minutes, and the girl pours 3 litres every 4 minutes. How much time will it take to fill 100 litres of water in the cistern?

(a) 36 minutes

(b) 42 minutes

(c) 48 minutes

(d) 44 minutes

Answer: c

Explanation:

Water filled by 1 boy in 1 min = $\frac{4}{3}$ litres

Water filled by 1 girl in 1 min = $\frac{3}{4}$ litres

Water filled by both = $\frac{25}{12}$ litres

Time taken to fill 100 litres = $100 \times \left(\frac{12}{25}\right) = 48$ min