Q:1 Find the mean proportional between 252 and 112.
1. 168
2. 174
3. 180
4. 194

Q:2 Ajay and Vijay come together in a partnership. Ajay invested Rs. 5000 for a year, and Vijay invested Rs. 2500 for x months. If the share of their profit is 4 : 3 then find the value of x.
1. 24
2. 15
3. 12
4. 18

Q:3 The product of the ages of two friends is 240. If the ratio of their ages 4 years ago was 1 : 2, what would be the sum of their ages 3 years later?
1. 32
2. 34
3. 36
4. 38

Q:4 In town A, 35% of people out of 150000 are employed, and in town B, 60% of the 200000 population is unemployed. What is the ratio of the number of employed people in town A to town B?
1. 1 : 1
2. 21 : 55
3. 32 : 21
4. 21 : 32

Q:5 Find the fourth proportional to 37, 256, and 259.
1. 256/7
2. 64
3. 1792
4. 1896

Q:6 A painter has three primary colors in their palette: blue, yellow, and red. The ratio of the remaining paint in each tube is 15 : 14 : 13. After mixing some paint for a masterpiece, the total amount of blue and red paint remaining is 1400 milliliters. Find the remaining amount of yellow paint.

1. 500 milliliters
2. 700 milliliters
3. 600 milliliters
4. 800 milliliters

Q:7 Find the fourth proportion of 15, 25, and 30.
1. 50
2. 60
3. 30
4. 40

Q:8 In a bag, there are balls of three different colors, i.e., blue, green, and red. The ratio of the number of blue, green, and red balls is 27 : 25 : 23. If the number of blue and red balls is 1500, then find the number of green balls in the bag.
1. 600
2. 500
3. 650
4. 750

Q:9 If 2.5, 3.5, x, and 4.2 are in proportion, then find the value of x.
1. 2.5
2. 3
3. 2
4. 1.5

Q:10 A bag contains 1 Rs, 50 paise & 25 paise coins and the ratio of their value is 30 : 11 : 7 and the total no. of coins are 480. Find the number of 50 paise coins.
1. 120
2. 110
3. 132
4. 122

Answer Key

1. (1)	**2.** (4)	**3.** (4)	**4.** (4)	**5.** (3)
6. (2)	**7.** (1)	**8.** (4)	**9.** (2)	**10.** (3)

Answers and Solutions

Q:1 The correct answer is **Option 1** i.e. **168.**
Let the mean proportion be x
252, x, 112
We know that
$a/x = x/c$
$252/x = x/112$
$x^2 = 252 \times 112$
$x = \sqrt{2 \times 2 \times 3 \times 3 \times 7 \times 2 \times 2 \times 2 \times 2 \times 7}$
$x = 2 \times 3 \times 2 \times 2 \times 7$
$x = 168$
Hence, the mean proportion is 168

Q:2 The correct answer is **Option 4** i.e. **18.**
Ajay invested Rs. 5000 for 6 months and Vijay invested Rs. 2500 for x months
$(5000 \times 12)/(2500 \times x) = 4/3$
$(50 \times 12)/(25 \times x) = 4/3$
$(2 \times 12)/x = 4/3$
$(2 \times 3)/x = 1/3$
x = 18 months

Q:3 The correct answer is **Option 4** i.e. **38.**
Let the ages of two friends be x and y
$\Rightarrow xy = 240.......(1)$
The ratio of ages 4 years ago = 1/2
$\Rightarrow (x - 4)/(y - 4) = 1/2$
$\Rightarrow 2x - 8 = y - 4$
$\Rightarrow y = 2x - 4$
Put this value in equation (1)
$\Rightarrow x (2x - 4) = 240$
$\Rightarrow 2x^2 - 4x = 240$
$\Rightarrow x^2 - 2x - 120 = 0$
$\Rightarrow x^2 - 12x + 10x - 120 = 0$
$\Rightarrow x (x - 12) + 10 (x - 12) = 0$
$\Rightarrow (x - 12) (x + 10) = 0$
$\Rightarrow x = 12$ years
$\Rightarrow y = 24 - 4 = 20$ years
Sum of the ages three years later = $(12 + 3) + (20 + 3) = 38$ years

Q:4 The correct answer is **option 4** i.e. **21 : 32.**
Number of employed people in town A = 35% of 150000
$= (35/100) \times 150000$
= 52500
Number of employed people in town B = 40% of 200000
= 80000
The required ratio = 52500/80000
= 21/32 = 21 : 32

Q:5 The correct answer is **Option 3** i.e. **1792.**
If a, b, c, d are in proportion, then a : b : : c : d
$\Rightarrow a \times d = b \times c$
Given,
a = 37, b = 256, c = 259, and d = ?
$\Rightarrow 37 \times d = 256 \times 259$
$\Rightarrow d = (256 \times 259)/37$
$\Rightarrow 256 \times 7 = 1792$

Q:6 The correct answer is **Option 2** i.e. **700 milliliters.**
The total amount of Blue and Red paint remaining is 1400 milliliters
$\Rightarrow 15x + 13x = 1400$
$\Rightarrow 28x = 1400$
$\Rightarrow x = 50$
The remaining amount of yellow paint = 14 × 50 = 700 milliliters

Q:7 The correct answer is **Option 1** i.e. **50.**
Let the given numbers, a, b, c, and d, are in proportion
Then, a/b = c/d
Similarly, in the given question,
a = 15, b = 25, c = 30 and d = x
$\Rightarrow 15/25 = 30/x$
$\Rightarrow 3/5 = 30/x$
$\Rightarrow x = 150/3$
$\Rightarrow x = 50$
Hence, the fourth proportion is 50

Q:8 The correct answer is **Option 4** i.e. **750**.
Let the ratio of the number of Blue, Green, and Red balls = 27x : 25x : 23x
The number of blue and Red balls = 1500
According to the question,

27x + 23x = 1500
50x = 1500
x = 30
So, the number of Green balls = 25x = 750

Q:9 The correct answer is **Option 2** i.e. **3.**
Let the given numbers, a, b, c, and d, be in the ratio
Then, a/b = c/d
Similarly, in the given question,
$\Rightarrow$ a = 2.5, b = 3.5, c = x and d = 4.2
$\Rightarrow$ 2.5/3.5 = x/4.2
$\Rightarrow$ 5/7 = 10x/42
$\Rightarrow$ x = 3
Hence, the value of x is 3

Q:10 The correct answer is **option 3** i.e **132**
Value of Rs.1, 50 Paise, 25 Paise = 30 : 11 : 7
No. of coins **=** 30 : 22 : 28
30x + 22x + 28x = 480
80x = 480, x = 6
22x = 132
Hence number of 50 paise coins is 132