Ratio and Proportion Questions for SBI Clerk set-2 pdf

Instructions

For the following questions answer them individually

Question 1

28% members of a certain group are married. What is the respective ratio between the number of married members to the number of unmarried members ?

A 7:17

B 5:18

C 7:18

D Cannot be determined

E None of these

Answer: C

Explanation:

Let total number of members be T.

The number of married number if percent is 28% = .28T

Hence, percent of unmarried members = (100-28)%=72%

And the number = .72T

The ratio of married to unmarried= .28/.72 = $\frac{7}{18}$

Question 2

The respective ratio of A and B is 8:7. If the salary of B increases by 20% and the salary of A increases by 21% the new ratio becomes 96: 97 respectively. What is A's salary?

A 22560

B 21600

C 20640

D 23040

E Cannot be determined

Answer: E

Explanation:

As we are not given any absolute figures, a unique value of A's salary cannot be determined.

Question 3

M, N, O and P divided Rs 44352 among themselves. M took $\frac{3}{4}th$ of the money, N took $\frac{1}{6}th$ of the remaining amount and rest was divided among O and P in the ratio of 3:4 respectively. How much did O get as his share?

A Rs.9600

B Rs. 10600

C Rs. 4760

D Rs. 9240

E Rs. 3960

Answer: E

Explanation:

Amount taken by M = $\frac{3}{4} * 44352$ = Rs 33264

Remaining amount = 44352 - 33264 = Rs 11088

Amount taken by N = $\frac{1}{6} * 11088$ = Rs 1848

Remaining amount = 11088 - 1848 = Rs 9240

O gets $\frac{3}{7}$th share of Rs 9240 => $\frac{3}{7}$*9240 = Rs 3960

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Question 4

At present Anil is 1.5 times Purvi's age. Eight years hence the respective ratio between Anil and Purvi's age then will be 25: 18. What is the Purvi's present age?

A 50 yr

B 28 yr

C 42 yr

D 36 yr

E None of these

Answer: B

Explanation:

Since Anil's age is 1.5 times the Purvi's age,

Purvi's age = x

Anil's age = 1.5x

$\frac{1.5x+8}{x+8} = \frac{25}{18}$

(1.5x+8)18 = 25(x+8)

27x+144 = 25x+200

2x = 56

x = 28

Question 5

Mr. X invested a certain amount in Debt and Equity funds in the ratio of 4 : 5 respectively. At the end of one year, he earned a total divided by 30%on his investment. After one year he reinvested the amount including dividend in the ratio of 6 : 7 in Debt and Equity Funds. If the amount reinvested in Equity Funds was Rs. 94,500/-, what was the original amount invested in Equity Funds?

A Rs. 75,000

B Rs. 81,000

C Rs. 60,000

D Rs. 65,000

E None of these

Answer: A

Explanation:
Since the amount reinvested is in the ratio 6:7,

the amount reinvested in equity is $\frac{7}{6+7}$ of total amount.

$\frac{7}{13}$ x = 94500

x = 94500*13/7

Since there was a 30% profit on this amount,

Original amount = (94500*13)/(7*1.3) = 135000

Amount invested in equity = $\frac{5}{5+4} * 135000$ = 75000

Question 6

Two types of rice (type 1 and type 2) were mixed in the respective ratio of 1 : 3. The mixture was then sold @ 75.60 per kg to gain a profit of 20%. If the price of type 1 rice is Rs. 75 per kg, what is the price of type 2 price per kg?

A Rs. 55

B Rs. 53

C Rs. 59

D Rs. 57

E Rs. 62

Answer: C

Explanation:
Profit = 0.2 CP
Profit = SP - CP
1.2CP = SP
Hence, CP = (SP/1.2) = 75.6/1.2 = 63
Now, let the cost of type 1 rice is T1 and cost of type 2 be T2.
63 = $\frac{T1+3T2}{4}$
= (75 + 3*x)/4
x = 59
Therefore, cost of type 2 price is 59.

Question 7

The respective ratio of two numbers is 16 : 21. If the first number is increased by 30% and the second number is decreased by 20%, what will be the respective ratio of the first and the second number?

A 32 : 21

B 26 : 21

C 25 : 21

D 20 : 21

E 22 : 21

Answer: B

Explanation:

Let the numerator and denominator be x and y.
(x/y) = (16/21)

Now, if the first number is increased by 30% and the second number is decreased by 20% then the ratio is $\frac{1.3*16}{0.8*21}$

Which equals $\frac{208}{168}$

Which equals $\frac{26}{21}$

Option B is the correct answer.

Question 8

Ravi is older than Simar by 4 years. Four years from now, the respective ratio between Ravi's age and Simar's age will be 9:8. What will be the Ravi's age 15 years ago? (in years)

A 19

B 36

C 17

D 25

E 21

Answer: C

Explanation:
Let Ravi's age be x and Simar's be y.
x=y+4
After 4 years,
(x+4)/(y+4) = 9/8
8x-9y = 4
After solving we get Ravi's age be 32 years.
15 years before his age is 32-17=17 years.

Question 9

Ratio of earnings of A and B is 8 : 9 respectively. If the earnings of A increased by 50% and the earnings of B decrease by 25%, the new ratio of their earnings becomes 16:9 respectively. What are 'A' earnings ?

A Rs. 37,000

B Rs. 28,500

C Rs. 22,000

D Cannot be determined

E None of these

Answer: D

Explanation:
Let the earnings of A and B be 8k and 9k respectively.

New earnings of A = 150/100 * 8k = 12k

New earnings of B = 3/4 * 9k = 6.75k

So, 12k : 6.75k = 16 : 9

But, from this equation, we cannot determine the value of k.

So, option d) is the correct answer.

Question 10

When a two-digit odd number is divided by a two digit even number, the quotient is 0.625. If the odd is 5 less than the even number, then which of the following will definitely be the ratio of the odd and even numbers respectively ?

A 5:8

B 8:5

C 6:9

D Cannot be determined

E None of these

Answer: A

Explanation:
Let the odd number be O and even number be E.
Given that $\frac{O}{E} = 0.625 = \frac{625}{1000} = \frac{5}{8}$