Ratio and Proportion Questions for Bank Exams – Ratio and Proportion Quiz at Smartkeeda.

Ratio and Proportion Quiz 1

Directions: Kindly study the following Questions carefully and choose the right answer:

1. The total number of students in a school is 2140. If the number of girls in the school is 1200, then what is the respective ratio of the total number of boys to the total number of girls in the school?

A. 26 : 25
B. 47 : 60
C. 18 : 13
D. 31 : 79
E. None of these

2. The income of A is 150% of the income of B and the income of C is 120% of the income of A. If the total income of A, B and C together is Rs. 86000, what is C's income?

A. Rs. 30000
B. Rs. 32000
C. Rs. 20000
D. Rs. 36000
E. None of these

3. Seats for Maths, English and General Knowledge are in the ratio of 5 : 7 : 8 respectively. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the respective ratio of increased seats?

A. 2 : 3 : 4
B. 6 : 7 : 8
C. 6 : 8 : 9
D. Can't be determined
E. None of these

4. 48% of the first number is 60% of the second number. What is the ratio of the first number to the second number?

A. 4 : 7
B. 3 : 4
C. 5 : 4
D. Can't be determined
E. None of these

5. Shreya, Nikita and Kamini share the profit in the ratio of 7 : 8 : 9. They has partnered for 12 months, 9 months and 6 months respectively. What was the ratio of their investments?

A. 21 : 32 : 54
B. 54 : 32 : 21
C. 21 : 54 : 32
D. 32 : 54 : 21
E. None of these

6. A man before his death writes his will. In it, he mentions that three-fifth of his wealth to be given to his Son-in-law and daughter. The ratio of amount to be given to the daughter and the son-in-law must be 4 : 1 respectively. Half the amount that his daughter is getting must be donated to his favourite NGO. One fourth of the remaining amount, he entitles his wife to receive and the rest which amounts to Rs. 16800, he wants to be burried along his grave. What amount he donated to the NGO mentioned in the question?

A. 25200 B. 28400 C. 33600
D. 36800 E. None of these

7. Acid and water are mixed in a vessel A in the ratio of 5 : 2 and in the vessel B in the ratio 8 : 5. In what proportion should quantities be taken out from the two vessels so as to form a mixture in which acid and water will be in the ratio of 9 : 4?

A. 7 : 2 B. 2 : 7 C. 7 : 4
D. 2 : 3 E. None of these

8. Rahul gives a crystal diamond ring to his wife Vijeta on their wedding anniversary. However, the ring falls off Vijeta's hand and breaks into three pieces the weights of which are in the ratio of 2 : 3 : 4. The value of each piece is directly proportional to the square of their weights. The given value of the diamond in the ring was Rs. 24300. Find the loss due to breakage.

A. Rs. 14300 B. Rs. 11400 C. Rs. 14600
D. Rs. 15600 E. None of these

9. A social group named BACHPAN offers fruit to the orphans. Every orphan receives orange, Litchi and apple in the ratio 6 : 4 : 14 in terms of dozen but the weight of one Apple is 640 grams and weight of orange and Litchi is in the ratio of 2 : 6. The weight of one Orange is 160 grams. Find the ratio of the percentage contribution of all the fruits in terms of weight?

A. 8.1 : 16.2 : 75.7 B. 9.3 : 18.6 : 76.7 C. 10 : 41 : 45
D. 13 : 58 : 20 E. None of these

10. In 2016 the ratio of salaries of Muskan and Babli was 2 : 3. The ratios of the salary of 2016 to that of the 2017, in the case of Muskan and Babli respectively, are 3 : 4 and 5 : 7. If this year i.e. 2017 the difference in their salaries is 2300, what is Babli's salary this year?

A. Rs. 5950 B. Rs. 6300 C. Rs. 3000
D. Rs. 2875 E. None of these

Correct Answers:

1	2	3	4	5	6	7	8	9	10
B	D	A	C	A	C	A	D	A	B

Explanations:

1. Total No. of boys = 2140 – 1200 = 940
Respective ratio = 940 : 1200 = 47 : 60.
Hence, option B is correct.

2. Let's take B's income as Rs. 100, then

$A : B : C = 150 : 100 : \frac{120 \times 150}{100}$

$= 15 : 10 : 18$

$\therefore$ C's share $= \frac{18}{43} \times 86000 =$ Rs. 36000

Hence, option D is correct.

3.

Required ratio $= 5 \times \frac{140}{100} : 7 \times \frac{150}{100} : 8 \times \frac{175}{100}$

$= 5 \times 140 : 7 \times 150 : 8 \times 175 = 2 : 3 : 4$

Hence, option A is correct.

4. Let the first number be x and the second number be y
Then, 48% of x = 60% of y

or, $\frac{x}{y} = \frac{60\%}{48\%} = \frac{5}{4}$

$\therefore$ Reqd. ratio = 5 : 4.

Hence, option C is correct.

5. Let the investment of Shreya be Rs. x,
that of Nikita be Rs. y and that of Kamini be Rs. z respectively.
Then, 12x : 9y : 6z = 7 : 8 : 9

or, $\frac{12x}{9y} = \frac{7}{8}$

$\therefore$ $32x = 21y$

$\therefore$ $\frac{21}{32}y$

And $\frac{9y}{6z} = \frac{8}{9}$

$\therefore$ $27y = 16z$

$\therefore$ $\frac{27}{16}y$

So, $x : y : z = \frac{21}{32}y : y : \frac{27}{16}y = 21 : 32 : 54$

Hence, option A is correct.

6. Let the total wealth be Rs. 100.

Amount to be given to the son-in-law and the daughter

$= \frac{3}{5} \times 100 = 60$

The given ratio of amount of the son-in-law and the daughter = 1 : 4

$\therefore$ Amt. to be given to the daughter $= \frac{4}{5} \times 60 = 48$

$\therefore$ Amt. to be donated to the NGO $= \frac{1}{2} \times 48 = 24$

Now, remaining amount = 100 – 60 – 24 = 16

Amt. to be given to wife $= \frac{1}{4} \times 16 = 4$

The final remaining amount = 16 – 4 = 12

Applying the rule of proportion here, we get

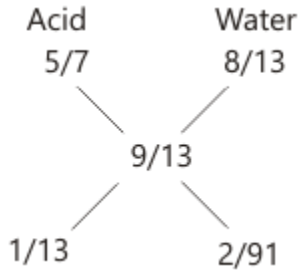
Since, 12 ≡ 16800

$\therefore$ 24 (the amount donated to the NGO) ≡ X

$\therefore$ $X = \frac{16800}{12} \times 24 = 33600$

Hence, option C is correct.

7. By allegation method:



$\therefore$ Required ratio $= \frac{1}{13} : \frac{2}{91} = 7 : 2$

Hence, option A is correct.

8. Ratio of each piece of diamond = 2x : 3x : 4x

∴ Solid crystal diamond = 2x + 3x + 4x = 9x

∴ Cost of solid crystal diamond = $(9x)^2 = 81x^2$

Cost of broken pieces of diamond = $(2x)^2 + (3x)^2 + (4x)^2 = 29x^2$

∴ Loss = $81x^2 - 29x^2 = 52x^2$

Given, $81x^2 = 24300$

∴ $x^2 = \frac{24300}{81} = 300$

∴ Loss = 52 × 300 = Rs. 15600.

Hence, option D is correct.

9. Ratio of fruits in terms of dozen = Orange: Litchi: Apple = 6 : 4 : 14

Ratio of per fruit in terms of weight = Orange: Litchi: Apple = 160 : 480 : 640

∴ Ratio of fruits (combined) in terms of weight (6 × 160) : (4 × 480) : (14 × 64)

⇒ 960 : 1920 : 8960

% contribution of Orange = $\frac{960}{11840} \times 100 = 8.1\%$

% contribution of Litchi = $\frac{1920}{11840} \times 100 = 16.2\%$

% contribution of Apple = $\frac{8960}{11840} \times 100 = 75.7\%$

Hence correct option (A) is correct.

10. Let a year ago i.e. in 2016 Muskan and Babli's salaries were x and y and now it is m and n respectively.

Given that,

$\frac{x}{y} = \frac{2}{3}$ **.....(i)**

$\frac{x}{m} = \frac{3}{4}$ **.....(ii)**

$\frac{y}{n} = \frac{5}{7}$ **.....(iii)**

From **(i)** and **(ii)**,

$\frac{m}{y} = \frac{(2 \times 4)}{(3 \times 3)} = \frac{8}{9}$ **.....(iv)**

From **(iii)** and **(iv)**

$$\frac{m}{y} = \frac{(8 \times 5)}{(9 \times 7)} = \frac{40}{63}$$

$$\frac{n}{m} = \frac{63}{40}$$

$$\frac{n}{m} - 1 = \frac{63}{40} - 1$$

$$\frac{n - m}{m} = \frac{63 - 40}{40}$$

$$\frac{n - m}{m} = \frac{23}{40} \quad \textbf{.....(v)}$$

Also, given that (n – m) = 2300

Putting the value In equation **(v)**

$$\frac{2300}{m} = \frac{23}{40}$$

$$m = \frac{40 \times 2300}{23} = 4000$$

So, n = 4000 + 2300 = 6300

Hence, option B is correct.