OBJECTIVE TYPE QUESTIONS

Mark the correct alternative in each of the following:

1. A ratio equivalent of 2 : 3 is
(a) 4 : 3
(b) 2 : 6
(c) 6 : 9
(d) 10 : 9
Solution:

The option (c) is correct answer.
We know that 6: 9 when divided by 3 we get 2: 3.

2. The angles of a triangle are in the ratio 1 : 2 : 3. The measure of the largest angle is
(a) 30°
(b) 60°
(c) 90°
(d) 120°
Solution:

The option (c) is correct answer.
We know that the sum of all the angles = 180°
So the largest angle = 3/ (1 + 2 + 3) × 180
We get
Largest angle = 3/6 × 180 = 90°

3. The sides of a triangle are in the ratio 2 : 3 : 5. If its perimeter is 100 cm, the length of its smallest side is
(a) 2 cm
(b) 20 cm
(c) 3 cm
(d) 5 cm
Solution:

The option (b) is correct answer.
We know that the length of smallest side = 100 × 2/ (2 + 3 + 5) = 200/10 = 20 cm

4. Two numbers are in the ratio 7 : 9. If the sum of the numbers is 112, then the larger number is
(a) 63
(b) 42
(c) 49
(d) 72
Solution:

The option (a) is correct answer.
Consider x as the largest number
So we get
7x + 9x = 112
16x = 112
x = 112/16 = 7

Here
7x = 7 × 7 = 49
9x = 9 × 7 = 63
Hence, the largest number is 63.

5. Two ratio 384 : 480 in its simplest form is
(a) 3 : 5
(b) 5 : 4
(c) 4 : 5
(d) 2 : 5
Solution:

The option (c) is correct answer.
384: 480 can be written as
384/480 = 4/5 when divided by 96

6. If A, B, C, divide Rs 1200 in the ratio 2 : 3 : 5, then B's share is
(a) Rs 240
(b) Rs 600
(c) Rs 380
(d) Rs 360
Solution:

The option (d) is correct answer.
So B's share = 1200 × 3/ (2 + 3 + 5)
On further calculation
B's share = 1200 × 3/10 = Rs 360

7. If a bus travels 126 km in 3 hours and a train travels 315 km in 5 hours, then the ratio of their speeds is
(a) 2 : 5
(b) 2 : 3
(c) 5 : 2
(d) 25 : 6
Solution:

The option (b) is correct answer.
We know that speed = distance/time
So the speed of bus = 126/3 = 42 km/h
Speed of train = 315/5 = 63 km/h
So the ratio of their speeds = 42: 63 = 2: 3

8. The ratio of male and female employees in a multinational company is 5 : 3. If there are 115 male employees in the company, then the number of female employees is
(a) 96
(b) 52
(c) 69
(d) 66
Solution:

The option (c) is correct answer.

Consider x as the number of female employees
So we get
5/3 = 115/x
By cross multiplication
5x = 115 × 3 = 345
By division
x = 345/5 = 69

9. Length and width of a field are in the ratio 5 : 3. If the width of the field is 42 m, then its length is
(a) 50 m
(b) 70 m
(c) 80 m
(d) 100 m
Solution:

The option (b) is correct answer.
It is given that length and width of a field = 5: 3
Consider x m as the length
Width of the filed = 42 m
So the length can be written as
5/3 = x/42
By cross multiplication
3x = 42 × 5 = 210
By division
x = 210/3 = 70

10. If 57 : x = 51 : 85, then the value of x is
(a) 95
(b) 76
(c) 114
(d) None of these
Solution:

The option (a) is correct answer.
It can be written as
57/x = 51/85
By cross multiplication
57 × 85/51 = x
So we get
x = 95

11. The ratio of boys and girls in a school is 12 : 5. If there are 840 girls in the school, then the number of boys is
(a) 1190
(b) 2380
(c) 2856
(d) 2142
Solution:

The options are not correct.

Consider x as the number of boys
Ratio of boys and girls = 12: 5
It can be written as
12/5 = x/840
By cross multiplication
x = 12/5 × 840 = 2016

12. If 4, a, a, 36 are in proportion, then a =
(a) 24
(b) 12
(c) 3
(d) 24
Solution:

The option (b) is correct answer.
It is given that 4, a, a, 36 are in proportion
We can write it as 4 : a :: a : 36
So we get
4/a = a/36
By cross multiplication
4 × 36 = a × a
We get
a² = 144
So a = 12

13. If 5 : 4 : : 30 : x, then the value of x is
(a) 24
(b) 12
(c) 3/2
(d) 6
Solution:

The option (a) is correct answer.
It can be written as
5/4 = 30/x
By cross multiplication
x = 30 × 4/5 = 24

14. If a, b, c, d are in proportion, then
(a) ab = cd
(b) ac = bd
(c) ad = bc
(d) None of these
Solution:

The option (c) is correct answer.
It is given that a, b, c, d are in proportion
We can write it as a : b :: c : d
So we get
a/b = c/d

By cross multiplication
ad = bc

15. If a, b, c, are in proportion, then
(a) $a^2 = bc$
(b) $b^2 = ac$
(c) $c^2 = ab$
(d) None of these
Solution:

The option (b) is correct answer.
It is given that a, b, c are in proportion
We can write it as
a : b :: b : c
So we get
a/b = b/c
By cross multiplication
$b^2 = ac$

16. If the cost of 5 bars of a soap is Rs. 30, then the cost of one dozen bars is
(a) Rs 60
(b) Rs 120
(c) Rs 72
(d) Rs 140
Solution:

The option (c) is correct answer.
Consider Rs x as the cost of one dozen bars
It can be written as
30/5 = x/12
So we get
x = 30/5 × 12 = Rs 72

17. 12 men can finish a piece of work in 25 days. The number of days in which the same piece of work can be done by 20 men, is
(a) 10 days
(b) 12 days
(c) 15 days
(d) 14 days
Solution:

The option (c) is correct answer.
Consider x days required by 20 men to do the same work
20/12 = 25/x
So we get
x = 12 × 25/20 = 15 days

18. If the cost of 25 packets of 12 pencils each is Rs 750, then the cost of 30 packets of 8 pencils each is
(a) Rs 600
(b) Rs 720

(c) Rs 640
(d) None of these
Solution:
The option (a) is correct answer.
We know that
Cost of 300 pencils = Rs 750
So consider Rs x as the cost of 240 pencils
It can be written as
750: 300 :: x: 240
So we get
Cost of 240 pencils = 750/300 × 240 = Rs 600

19. If a, b, c are in proportion, then
(a) a : b : : b : c
(b) a : b : : c : a
(c) a : b : : c : b
(d) a : c : : b : c
Solution:

The option (a) is correct answer.
We know that a, b, c are in proportion
So we get a: b :: b: c
It can be written as $ac = b^2$

20. The first, second and fourth terms of a proportion are 16, 24 and 54 respectively. The third term is
(a) 32
(b) 48
(c) 28
(d) 36
Solution:

The option (d) is correct answer.
Consider x as the third term
We can write it as
16: 24 = x: 54
So we get
16/24 = x/54
By cross multiplication
x = 16/24 × 54
We get
x = 36