



MATHS

BOOKS - UNITED BOOK HOUSE

Ratio and proportion

Exercise

1. Multiple Choice Questions (MCQ) If $r, 8, 16, q$ are in continued proportion, then the value of $(p + q)$ is

A. 24

B. 66

C. 36

D. 48

Answer:



Watch Video Solution

2. If $x^2 + 4y^2 = 4xy$, then $x : y =$

A. 2 : 1

B. $1 : 2$

C. $-2 : 1$

D. $-1 : 3.$

Answer:



Watch Video Solution

3. If the mean peoportional of $1/12.$ and $a/75$ is $1/5,$ then the value of a is

A. 24

B. 36

C. 48

D. $1/25$.

Answer:



Watch Video Solution

4. If $A : B = 2 : 3$, $B : C = 4 : 5$ and $C : D = 6 :$

7, then $A : D =$

A. $16 : 35$

B. 48 : 105

C. 35 : 8

D. 8 : 35.

Answer:



Watch Video Solution

5. If $(p^2 + q^2)(m^2 + n^2) = (\pm + qn)^2$, then

$m : n =$

A. $P^2 : q^2$

B. $q^2 : q^3$

C. $p : q$

D. $q : p$.

Answer:



Watch Video Solution

6. If $bcx = cay = abz$, then $x : y : z =$

A. $ab : bc : ca$

B. $a : b : c$

C. $a^2 : b : c$

D. $a : b^2 : c$.

Answer:



Watch Video Solution

7. If $a + 1/b = b + 1/c = 1$, then the value of $c + 1/a$ is

A. -1

B. 0

C. 1

D. none of these.

Answer:



Watch Video Solution

8. If $a/3 = b/4 = c/7 = 2a - 2b + c/p$, then the value of p is

A. 4

B. 5

C. 6

D. none of these.

Answer:



Watch Video Solution

9. x is a positive number and $\frac{3}{4} : x :: x : \frac{27}{64}$,

then the value of x is

A. $\frac{9}{16}$

B. $\frac{3}{4}$

C. $16/9$

D. $4/3$.

Answer:



Watch Video Solution

10. If x, y, z are in continued proportion, then

$$\frac{1}{y^2 - x^2} + \frac{1}{y^2 - z^2} =$$

A. $\frac{1}{x^2}$

B. $\frac{1}{y^2}$

C. $\frac{1}{z^2}$

D. $1/y$.

Answer:



Watch Video Solution

11. The mean proportional between $(3 + \sqrt{2})$ and $(12 - \sqrt{32})$ is ____

A. $\sqrt{7}$

B. $2\sqrt{7}$

C. 6

D. $\frac{15 - 3\sqrt{2}}{2}$.

Answer:



Watch Video Solution

12. The ratio $2^{1.5} : 2^{0.5}$ is the same as ____

A. 2 : 1

B. 3 : 1

C. 6 : 1

D. 3 : 2.

Answer:



Watch Video Solution

13. If $a : b = 2/9 : 1/3$, $b : c = 2/7 : 5/14$ and $d : c = 7/10 : 3/5$ then $a : b : c : d$ is _____

A. 4 : 6 : 7 : 9

B. 16 : 24 : 30 : 35

C. 8 : 12 : 15 : 7

D. 30 : 35 : 24 : 16.

Answer:



Watch Video Solution

14. To get the ratio $p : q$ (for p not equals to q) one has to add a number to each term of the ratio $x : y$, the number is ____

A. $\frac{py - qx}{x - y}$

B. $\frac{py - qx}{y - x}$

C. $\frac{py - qx}{q - p}$

D. $\frac{py - qx}{p - q}$

Answer:



Watch Video Solution

15. If $a : (b + c) = 1 : 3$ and $c : (a + b) = 5 : 7$, then

$b : (a + c)$ is equal to _____

A. $1 : 2$

B. $2 : 3$

C. 1 : 3

D. 2 : 1.

Answer:



Watch Video Solution

16. The ratio of $25^{2.5} : 5^3$ is same as _____

A. 5 : 3

B. 5 : 6

C. 1 : 25

D. 25 : 1.

Answer:



Watch Video Solution

17. If $2a = 3b = 8c$, then $a : b : c$ equals ____

A. 2 : 3 : 8

B. 24 : 8 : 3

C. 12 : 8 : 3

D. N.O.T.

Answer:



Watch Video Solution

18. Tom is chasing Jerry. In the same interval of time Tom jumps 8 times while Jerry jumps 6 times. But the distance covered by Tom in 7 jumps is equal to the distance covered by Jerry in 5 jumps. The ratio of speed of Tom and Jerry is ____

A. 20 : 21

B. 21 : 20

C. 48 : 35

D. 28 : 15.

Answer:



Watch Video Solution

19. If $a : b = b : c$, then $a^4 : b^4$ is equal to ____

A. $ac : b^2$

B. $a^2 : c^2$

C. $c^2 : a^2$

D. $b^2 : ac$.

Answer:



Watch Video Solution

20. x , 12, y and 27 are in continued proportion.

Then $x + y$ equals ____

A. $56/3$

B. 20

C. 30

D. 26

Answer:



Watch Video Solution

21. If
$$\frac{b}{a+b} = \frac{a+c-b}{b+c-a} = \frac{a+b+c}{2a+b+2c}$$

where $a + b - c \neq 0$, show that $\frac{a}{2} = \frac{b}{3} = \frac{c}{4}$

.

A. 4 : 3 : 2

B. 2 : 4 : 3

C. 2 : 3 : 4

D. N.O.T.

Answer:



Watch Video Solution

22. If $f(x + y) = f(x) + f(y)$, then the value of $f(0)$

A. only $1/2$

B. only -1

C. $\frac{1}{2}$ and -1

D. none of these.

Answer:



Watch Video Solution

23. If $0.75 : x = 5 : 8$, then x is equal to ____

A. 1.25

B. 1.2

C. 1.12

D. 1.30.

Answer:



Watch Video Solution

24. In a bag, there are coins of 25 p, 10 p and 5 p in the ratio of 1 : 2 : 3. If there is ₹ 30 in all, how many 5 p coins are there?

A. 50

B. 100

C. 150

D. 200

Answer:



Watch Video Solution

25. The salaries A, B and C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries?

A. 10 : 11 : 20

B. 3 : 3 : 10

C. 23 : 33 : 60

D. none of these.

Answer:



Watch Video Solution

26. Whiche of following ratios is greatest?

A. 21 :29

B. 7 : 15

C. 17 : 25

D. 15 : 23.

Answer:



Watch Video Solution

27. The third proportional to 0.36 and 0.48

is _____

A. 0.42

B. 0.1728

C. 0.94

D. 0.64.

Answer:



Watch Video Solution

28. If a carton containing a dozen mirrors is dropped, which of the following cannot be the ratio of broken mirrors to unbroken mirrors?

A. 2 : 1

B. 3 : 1

C. 7 : 5

D. 3 : 2.

Answer:



Watch Video Solution

29. What least number must be subtracted from each of the numbers 14, 17, 34 and 42 so that remainder may be proportional?

A. 1

B. 2

C. 3

D. 7

Answer:



Watch Video Solution

30. The least whole number which when substrated from both the terms of the ratio 6 : 7 gives a ratio less than 16 : 21 is_____

A. 2

B. 3

C. 4

D. 6

Answer:



Watch Video Solution

31. The speeds of three cars are in the ratio 5 : 4 : 6. The ratio between the time taken by them to travel the same distance is_____

A. 10 : 12 : 15

B. 5 : 4 : 6

C. 12 : 15 : 10

D. 6 : 4 : 5.

Answer:



Watch Video Solution