Academic Year: 2021-2022
Subject: Mathematics

Name: _____ Roll. No.: _____

Std.: X Div.: _____ Topic: Proportion MCQ

1. If 3, 12, x , 64 are in proportion then x = ?

a) 12 b) 16 c) 18 d) 20

2. a, b, c, d is in proportion then ad =

a) bc b) cb c) a & b both d) not defined

3. (x+2), (x+3), (x+5), (x+7) are in proportion then x =

a) 1 b) 2 c) 3 d) 4

4. If Four number are in proportion then product of extreme =

(a) product of first two terms **(b)** product of means

(c) product of middle two terms **(d)** option (b) and (c) both

5. If a, b ,c are in continued proportion then _____

(a) 2b = a +c **(b)** *2b = ac* **(c)** b^2 =ac **(d)** *All of these*

6. Find third proportion to 1.2 and 1.8.

(a) 2.5 **(b)** 2.7 **(c)** 3 **(d)** 3.2

7. If y is geometric mean between x, y then _____.

(a) x = yz **(b)** 2x = yz **(c)** y^2 =xz **(d)** x^2 =yz

8. The mean proportional between 6.25 and 4.5 is x then x = ?

(a) 2 **(b)** 5 **(c)** 3 **(d)** 1

9. What number should be subtracted from each of the number 23,30,57 and 78 so that the remainders are in proportion

(a) 16 **(b)** 10 **(c)** 8 **(d)** 6

10. If a + c = mb and $\frac{1}{a} + \frac{1}{b} = \frac{m}{c}$, establish relationship between a, b, c, d.

(a) ab=cd **(b)** bc=ad **(c)** b=a + c + d **(d)** b =abc

11. 6 is mean proportion between two numbers x and y and 48 is third proportion to x and y. Find the numbers.

(a) 3 & 12 **(b)** 4 & 9 **(c)** 6 & 6 **(d)** none of these

12. If $\frac{x}{y} = \frac{p}{q}$ then $\frac{x+y}{y} = \frac{p+q}{q}$ is _____property

(a) Altenendo **(b)** Componenedo

(c) Invertendo **(d)** none of these

Answer Questions 13 to 15 using following

$$\frac{3x+\sqrt{9x^2-5}}{3x-\sqrt{9x^2-5}}=5$$

13. apply componenod and dividend in the above sum

(a) $\frac{6x}{\sqrt{9x^2-5}}=\frac{6}{2}$ **(b)** $\frac{6x}{\sqrt{9x^2-5}}=\frac{5}{2}$

(c) $\frac{3x}{\sqrt{9x^2-5}}=\frac{3}{2}$ **(d)** $\frac{6x}{\sqrt{9x^2-5}}=\frac{3}{2}$

14. what is the value of x

(a) 1 (b) -1 (c) option (a) & (b) both (d) none of these

15. If $\frac{3a+4b}{3c-4d}=\frac{3a-4b}{3c-4d}$, then _____ is true

(a) ad = bc **(b)** ab=cd **(c)** a = bcd **(d)** b^2 = ac

16 The fourth proportional to 7, 13 and 35 is _____.

a) 56 b) 65 c) 52 d) 78

17. If $\frac{3x+5y}{3x-5y}=\frac{7}{3}$, find x : y.

a) 3 : 10 b) 10 :3 c) 5:3 d) 3:5

18. Given that $\frac{a^3+3ab^2}{b^3+3a^2b}=\frac{63}{62}$, a:b = ?

(a) 5:1 **(b)** 1:5 **(c)** 3:2 **(d)** 2:3

19. If $\frac{x^4+1}{2x^2}=\frac{17}{8}$ then x =?

(a) ± 3 **(b)** ± 2 **(c)** ± 4 **(d)** ± 6

Answer Q20 to 22 using the following case:

$$\frac{\sqrt{X+5}+\sqrt{X-16}}{\sqrt{X+5}-\sqrt{X-16}}=\frac{7}{3}$$

20. Apply componendo-dividendo

(a) $\frac{\sqrt{X+5}+\sqrt{X-16}+\sqrt{x+5}-\sqrt{x-16}}{\sqrt{X+5}-\sqrt{X-16}-\sqrt{x+5}+\sqrt{x-16}}=\frac{7}{3}$

(b) $\frac{\sqrt{X+5}+\sqrt{X-16}+\sqrt{x+5}-\sqrt{x-16}}{\sqrt{X+5}-\sqrt{X-16}-\sqrt{x+5}+\sqrt{x-16}}=\frac{10}{3}$

(c) $\frac{\sqrt{X+5}+\sqrt{X-16}+\sqrt{x+5}-\sqrt{x-16}}{\sqrt{X+5}-\sqrt{X-16}-\sqrt{x+5}+\sqrt{x-16}}=\frac{10}{5}$

(d) $\frac{\sqrt{X+5}+\sqrt{X-16}+\sqrt{x+5}-\sqrt{x-16}}{\sqrt{X+5}-\sqrt{X-16}-\sqrt{x+5}+\sqrt{x-16}}=\frac{5}{2}$

21. Which is correct step after Q20

(a) $\frac{\sqrt{x+5}}{\sqrt{x-16}}=\frac{10}{4}$ **(b)** $\frac{2\sqrt{x+5}}{2\sqrt{x-16}}=\frac{10}{3}$

(c) $\frac{\sqrt{x+5}}{\sqrt{x-16}}=\frac{10}{4}$ **(d)** $\frac{\sqrt{x+5}}{\sqrt{x-16}}=\frac{7}{3}$

22. With reference Q 21, value of x = ?

(a) 21 **(b)** 20 **(c)** 18 **(d)** 15

23. $\frac{8x+13y}{8x-13y} = \frac{9}{7}$, **x = ?**

(a) 12y **(b)** 13:1 **(c)** 13y **(d)** none of these.

24. Find mean proportion of $6 + 3\sqrt{3}$ and $8 - 4\sqrt{3}$

(a) 12 **(b)** $\sqrt{12}$

(c) $2\sqrt{3}$ **(d)** option (b) and (c) both

25. $\frac{x^2+y^2}{x^2-y^2} = 2\frac{1}{8}$, **x : y = ?**

(a) 3:5 **(b)** 9:25 **(c)** 25:9 **(d)** 5:3

1	**B**	**2**	**C**	**3**	**A**	**4**	**D**	**5**	**C**
6	**B**	**7**	**C**	**8**	**D**	**9**	**D**	**10**	**B**
11	**A**	**12**	**B**	**13**	**C**	**14**	**C**	**15**	**A**
15	**B**	**17**	**B**	**18**	**C**	**19**	**B**	**20**	**D**
21	**A**	**22**	**B**	**23**	**C**	**24**	**D**	**25**	**D**