

11th STD

FINAL EXAMINATION

MATHS PRACTICAL QUESTIONS (20 marks*)

1. Find x, y, z using Cramer's rule, if $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = -2$, $\frac{1}{x} - \frac{2}{y} + \frac{1}{z} = 3$, $\frac{2}{x} - \frac{1}{y} + \frac{3}{z} = -1$
2. The sum of three numbers is 6. Thrice the third number when added to the first number gives 7. On adding the sum of second and third numbers to three times the first number, we get 12. Find the three numbers using determinants.
3. Find K , if following equations are consistent
 $(K + 1)x + (K - 1)y + (K - 1)z = 0$, $(K - 1)x + (K + 1)y + (K - 1)z = 0$, $(K - 1)x + (K - 1)y + (K + 1)z = 0$
4. Find the value of K , if the equations $Kx + 3y + 4z = 0$, $x + Ky + 3z = 0$, $3x + 4y + 5z = 0$ are consistent. Find their common solution for the smallest value of K .
5. Find K , if the area of the triangle with vertices at $P(3, -5)$, $Q(-2, K)$, $R(1, 4)$ is $33/2$ sq. units.
6. Find the equation of the line joining the points $P(2, -3)$ and $Q(-4, 1)$, using determinants.

7. Using logarithms find, x , if $x = \sqrt{\frac{(2.3)^5 + (0.537)^3}{(72.5)^4 - (18.25)^2}}$

8. Using logarithms find, x , if $x = \sqrt{\frac{(42.3)^3 + (50.37)^3}{(7.205)^4 - (1.825)^2}}$

9. Using logarithms find, x , if $x = \sqrt{\frac{(23.5)^5 + (0.537)^3}{(725)^4 - (1.85)^2}}$

10. Using logarithms find, x , if $x = \sqrt{\frac{(2.3)^5 + (0.537)^3}{(72.5)^4 - (18.25)^2}}$

11. Using logarithms find, x , if $x = \sqrt{\frac{(23)^5 + (0.537)^3}{(72.5)^2 - (0.1825)^3}}$

12. Using logarithms find, x , if $x = \sqrt{\frac{(2.3)^2 + (0.537)^5}{(72.5)^3 - (18.25)^4}}$

Note*

1. Total marks (100) = Theory (80) + Practicals (20)

2. for Practicals, students will get 6 questions. Out of which they have to solve any 4.

Each question carries 5 marks.