

Worksheet-3 (Pair of linear Eqⁿ)

1. If $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ so pair of linear equation will be _____

2. If $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ so pair of linear equation will be _____

3. The values of x and y from the equations $x + y = 5$ and $2x - 3y = 4$ are -

(a) $19, \frac{6}{5}$

(b) $-19, \frac{-6}{5}$

(c) $19, \frac{-6}{5}$

(d) N.O.T (None of these)

4. The given pair of equations $3x - y = 3$ and $9x - 3y = 9$ has-

(a) one solution

(b) No solution

(c) infinite many solution

(d) N.O.T

5. The values of x and y from the equations $x + y = 14$ and $x - y = 4$ are -

(a) $x = 9, y = 4$

(b) $x = 9, y = 5$

(c) $x = 5, y = 9$

(d) N.O.T

6. For what values of K will the following pair of linear equations have infinite many solutions?

$$Kx + 3y - (K - 3) = 0$$

$$12x + Ky - K = 0$$

7. The difference of two number is 26 and one number is three times the other number. Find the numbers.

8. A fraction becomes $\frac{1}{3}$ when 1 is subtracted from the numerator and it becomes $\frac{1}{4}$ when 8 is added to its denominator. Find the fraction.

9. Five years ago, Nuri was thrice as old as Sonu. Ten years later, Nuri will be twice as old as Sonu. How old are Nuri and Sonu.

10. A fraction becomes $\frac{9}{11}$, if 2 is added to both the numerator and the denominator if 3 is added to both the numerator and the denominator, it becomes $\frac{5}{6}$. Find the fraction.

Worksheet-4 (Quadratic Eqⁿ)

- The discriminant of quadratic Equation $x^2 + 2x - 143 = 0$ is :
(a) 576 (b) 26 (c) 28 (d) 29
- The roots of Quadratic equation $3x^2 - 5x + 2 = 0$ are :
(a) 1, 2/3 (b) 2, 2/3 (c) 3, 2/3 (d) 4, 2/3
- Which type of equation $(x + 2)^3 = (x^2 - 1)2x$ is
(a) linear (b) quadratic (c) Cubic (d) N.O.T
- The discriminant of a quadratic equation $2x^2 + x - 6 = 0$ is :-
(a) -11 (b) 13 (c) 125 (d) 49
- Which of the following is a quadratic equation :
(a) $x + \frac{1}{x} = 2$ (b) $x^2 + 3x^{-1} = 2$ (c) $x^3 - x^2 = 5$ (d) $x^4 + 1 = 0$
- Find two numbers whose sum is 27 and product is 182.
- Find two consecutive integers, sum of whose square is 365.
- A train travels at a certain average speed for a distance of 63 km and then travels a distance of 72km at an average speed of 6 km/h more than its original speed. If it takes 3 hours to complete the total journey. What is its original average speed?

Worksheet-5 (Arithmetic progressions)

- The next term of the A.P $\sqrt{6}$, $\sqrt{24}$, $\sqrt{54}$, is
(a) $\sqrt{60}$ (b) $\sqrt{72}$ (c) $\sqrt{96}$ (d) $\sqrt{108}$
- In an A.P 2, 7, 12, _____ 20th term is -
- The 10th term of the A.P. - 0.1, -0.2, -0.3..... is
- The sum of the first 15 positive multiples of 8.
- How many three-digit numbers are divisible by 7?