ODM EDUCATIONAL GROUP
Changing your Tomorrow

PERIOD 1

MATHEMATICS

CHAPTER NUMBER :~ 4
CHAPTER NAME :~LINEAR EQUATIONS IN TWO VARIABLES

Website: www.odmegroup.org
Email: info@odmps.org
Toll Free: 1800 120 2316
Sishu Vihar, Infocity Road, Patia, Bhubaneswar- 751024

LEARNING OUTCOME:-

1.Students will be able to learn concepts about Linear Equations In Two Variables.

Ex 4.1, 1

The cost of a notebook is twice the cost of a pen. Write a linear equation in two variables to represent this statement.

(Take the cost of a notebook to be Rs x and that of a pen to be Rs y.)

Let the cost of a notebook be Rs x

and the cost of pen be Rs y

It is given that

Cost of notebook = 2 × Cost of pen

$$x = 2y$$

$$x - 2y = 0$$

$x - 2y = 0$ is the linear equation in two variables

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(i) $2x + 3y = 9.3\overline{5}$

Rough:

$9.3\overline{5} = 9.35555...$

$2x + 3y = 9.3\overline{5}$

$2x + 3y - 9.3\overline{5} = 0$

$2x + 3y + (-9.3\overline{5}) = 0$

Comparing this equation with $ax + by + c = 0$,

$a = 2,\ b = 3,\ c = -9.3\overline{5}$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(ii) $x - \frac{y}{5} - 10 = 0$

$$x - \frac{y}{5} - 10 = 0$$

$$1x + \left(\frac{-1}{5}\right) y + (-10) = 0$$

Comparing with $ax + by + c = 0$

$$a = 1,\ b = \frac{-1}{5} \ \&\ c = -10$$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(iii) $-2x + 3y = 6$

$-2x + 3y = 6$

$-2x + 3y - 6 = 0$

$-2x + 3y + (-6) = 0$

Comparing this equation with $ax + by + c = 0$,

$a = -2,\ b = 3,\ c = -6$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(iv) $x = 3y$

$x = 3y$

$x - 3y = 0$

$x - 3y + 0 = 0$

$1x + (-3)y + 0 = 0$

Comparing this equation with $ax + by + c = 0$,

$a = 1, b = -3, c = 0$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(v) $2x = -5y$

$2x = -5y$

$2x + 5y = 0$

$2x + 5y + 0 = 0$

Comparing this equation with $ax + by + c = 0$,

$a = 2, b = 5, c = 0$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(vi) $3x + 2 = 0$

$3x + 2 = 0$

$3x + 0 + 2 = 0$

$3x + 0y + 2 = 0$

Comparing this equation with $ax + by + c = 0$,

$a = 3, b = 0, c = 2$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(vii) $y - 2 = 0$

$y - 2 = 0$

$0 + y - 2 = 0$

$0x + y - 2 = 0$

$0x + 1y + (-2) = 0$

Comparing this equation with $ax + by + c = 0$,

$a = 0, b = 1, c = -2$

Ex 4.1, 2

Express the following linear equations in the form

$ax + by + c = 0$ and indicate the values of a, b, c in each case:

(viii) $5 = 2x$

$5 = 2x$

$-2x + 5 = 0$

$-2x + 0 + 5 = 0$

$-2x + 0y + 5 = 0$

Comparing this equation with $ax + by + c = 0$,

$a = -2,\ b = 0,\ c = 5$

HOMEWORK ASSIGNMENT

Exercise 4.1

AHA

1. What will be the nature of roots of quadratic equation $2x2 + 4x - n = 0$?

THANKING YOU

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