



Exercise Set 13.1 – Solutions

Chapter 13, *Two Variables, One Line*

1. Write a linear equation

Given:

- $a = 3$
- $b = 0$
- $c = -1/5$

The standard form is:

$$ax + by + c = 0$$

Therefore,

$$3x + 0y - 1/5 = 0$$

So,

$$3x - 1/5 = 0$$

2. Complete the table

Standard form:

$$ax + by + c = 0$$

Linear equation	Standard form	Coefficient of x	Coefficient of y	Constant term
$y - 15 = \sqrt{2}x$	$-\sqrt{2}x + y - 15 = 0$	$-\sqrt{2}$	1	-15
$3y - 2x = 0$	$-2x + 3y + 0 = 0$	-2	3	0
$5x = 3y$	$5x - 3y + 0 = 0$	5	-3	0
$x = 8$	$x + 0y - 8 = 0$	1	0	-8

$3y = 1$

$0x + 3y - 1 = 0$

0

3

-1

3. Applications of Linear Equations

(i) Cost of a notebook and a pen

Let:

- Cost of notebook = ₹t
- Cost of pen = ₹p

The notebook costs **twice** the pen.

Therefore:

$$t = 2p$$

Charlie wrote:

$$t = 2p$$

Meera wrote:

$$p = 2t$$

The correct representation is:

 $t = 2p$

because the notebook costs twice the cost of the pen.

(ii) Cricket match

Let:

- Runs scored by one batsman = x
- Runs scored by the other batsman = y

Together they scored 176 runs.

Therefore:

$$x + y = 176$$

Manisha's representation is:

$$x + y = 176$$

This is a **correct representation** of the situation.

 **Answer: Yes, $x + y = 176$ is correct.**