# LINEAR EQUATION IN TWO VARIABLES

## APPLICATIONS OF LINEAR EQUATIONS IN TWO VARIABLES

## EXERCISE

**Q.1** The cost of petrol in a city is ₹50 per litre. Set up a linear equation with x representing the number of litres any y representing the total cost in ₹.

**Q.2** The work done by a body on application of a constant force is directly proportional to the distance travelled by the body. Express this in the form of an equation in few variables and draw the graph of the same by taking the constant as 4 units. Read from the graph the work done when the distance travelled by the body is

(i) 2 units (ii) 3 units.

**Q.3** (a) The taxi fare in a city is as follows :

For the first kilometer, the fare is ₹50 and for the subsequent distance it is ₹20 per km, taking the distance covered as x km and total fare as ₹y. Write a linear equation for this information and draw its graph.

(b) The Autorikshaw fare in a city is charged ₹10 for the first kilometer and @ ₹ 4 per kilometer for subsequent distance covered. Write the linear equations to express the above statement. Draw the graph of the linear equation.

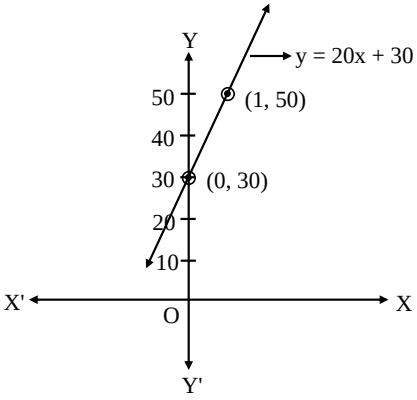
**Q.4** A man leaves half of his property for his wife, one third for his daughter and remaining for his son. If son's share is 60,000, how much money did he leave and how much money did his wife and son get ?

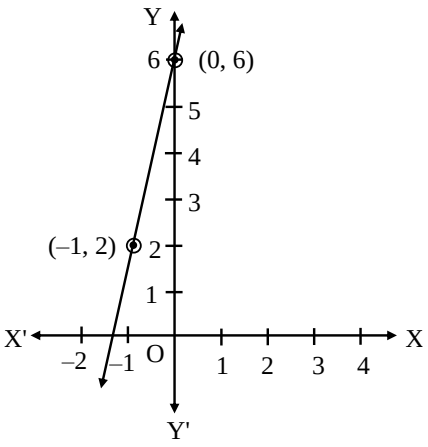
# ANSWER KEY

**1.** $y = 50\ x$.

**2.** $y = Kx$ ; If $K = 4$, $y = 4x$ ; Again for $x = 2$, $y = 8$ ; $x = 3$, $y = 12$

**3.** (a) $y = 20x + 30$ (b) $y = 4x + 6$




**4.** ₹3,60,000, ₹1,80,000 and ₹1,20,000.