SUBJECT- MATHEMATICS

CLASS-IX

CHAPTER NUMBER - 4

CHAPTER NAME - LINEAR EQUATIONS IN TWO VARIABLES

WORKSHEET : 2

1. Write the linear equation such that each point on its graph has an ordinate 3 times its abscissa.
2. Draw the graph of each of the following linear equations in two variables:
   i. $y = 3x$
   ii. $3 = 2x + y$
3. Raj tells his daughter Aarv, 'Seven years ago, I was seven times as old as you were then also, three years from now, I shall be three times as old as you will be.' If the present ages of Aarv and Raj are x and y years respectively, represent this situation algebraically as well as graphically.
4. Let y varies directly as x. If $y = 12$ when $x = 4$, then write a linear equation. What is the value of y, when $x = 5$?
5. The parking charge for vehicles in super Delhi Metro is Rs 20 for first two hrs and Rs. 10 for subsequent hr. Assume total parking time to be x hrs. (where $x \geq 2$) and total parking charge as y. Write the linear equation for above relation and draw graph. Find the parking charges for 5 hrs from Graph
6. Find the value of m, if $(5, 8)$ is a solution of the equation $11x - 2y = 3m$, then find one more solution of this equation.
7. Draw the graph of the equation $y = mx + c$ for $m = 3$ and $c = -1$ (a straight line in Cartesian plane). Read from the graph the value of y when $x = 2$.
8. If x is the number of hours a labourer is on work and y is his wages in rupees, then $y = 4x + 3$. Draw the work wages graph of this equation. From the graph, find the wages of a labourer who puts in 4 hours of work.
9. Ram is half of his father's age. Twenty years ago the age of father was six times age of Ram. Find the present ages of Ram and his father.
10. Find the coordinates of the points where the line represented by the linear equation $y = 2x - 4$ intersects $x - axis$ and $y - axis$.

ANSWERS:

1. $y = 3x$
2. Graph
3. $x = 12$ years, $y = 42$ years
4. $y = 3x$, $y = 15$
5. $10x - y = -10$, charges=Rs 60
6. $m = 13$, $(3, -3)$
7. $y = 5$
8. Wages of labour = Rs 19
9. Ram's Present age= 25 years, Father's Present age = 50 years
10. $(2, 0)$ and $(0, -4)$