

Chapter 02

POLYNOMIALS

Geometrical Representation Of Linear Polynomial:

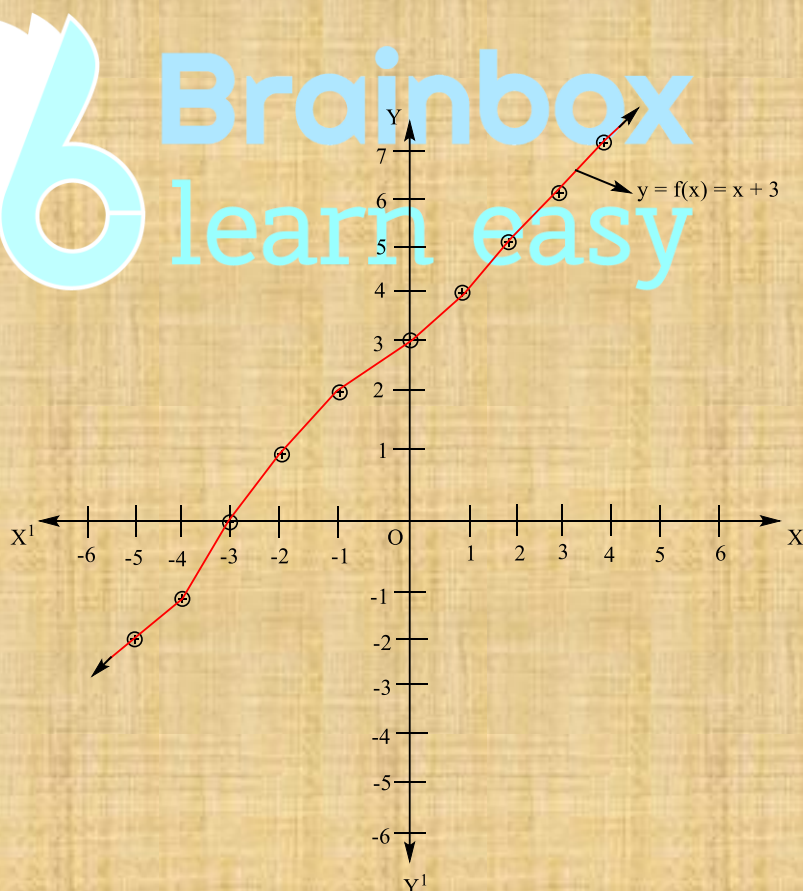
We know that graph of the linear function $y = f(x) = ax + b$ is a straight line.

EXAMPLE:

Graph of the function $f(x) = x + 3$.

SOLUTION:

x	-5	-4	-3	-2	-1	0	1	2	3	4
$y = x + 3$	-2	-1	0	1	2	3	4	5	6	7



Observations:

- i. Now we can see that this graph cuts the x-axis at $x = -3$.
- ii. If $y = 0 \Rightarrow x + 3 = 0 \Rightarrow x = -3$, which is a root or zero of the polynomial $x + 3 = 0$.
- iii. Actually $x = -3$ is the value of 'x' where graph of $y = f(x) = x + 3$ intersects the x-axis.

NOTE:

A linear polynomial $ax + b$, $a \neq 0$, the graph of $y = ax + b$ is a straight line which intersects the x-axis at exactly one point namely, $\left(\frac{-b}{a}, 0\right)$.

