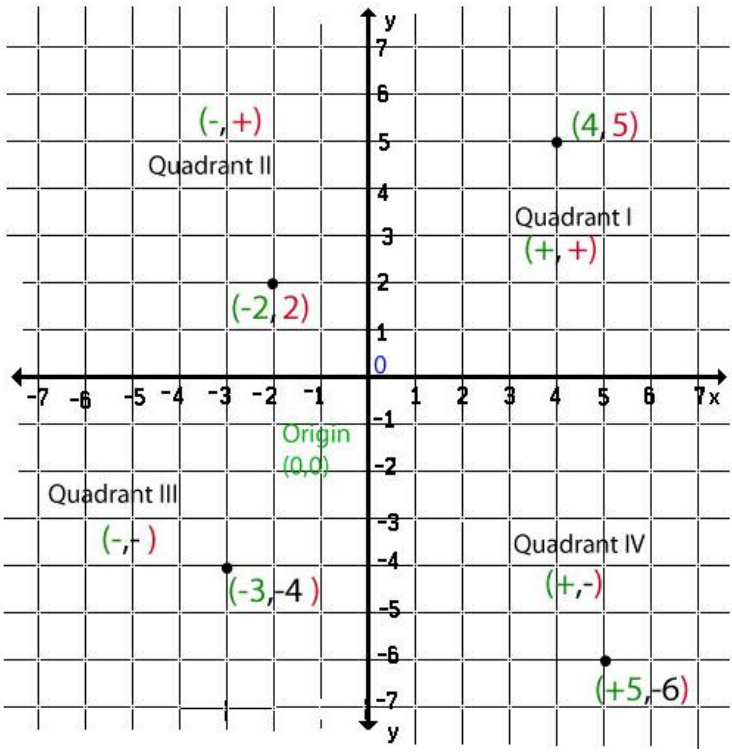
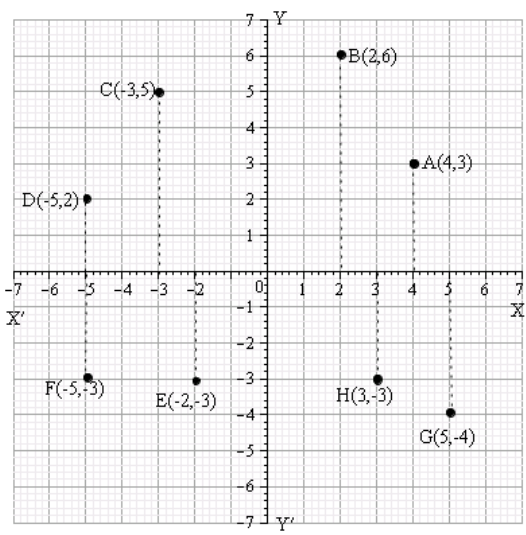
Graphs



Q1.

Answer :

Let $X'OX$ and YOY' be the coordinate axes.



Q2.

(i) On the $x-$axis, take 4 units to the right of the y axis; and then on the $y-$axis, take 3 units above the $x-$axis.
Thus, we obtain the point $A(4,3)$
(ii) On the $x-$axis, take 2 units to the right of the $y-$axis; and then on the $y-$axis, take 6 units above the x $-$ axis.
Thus, we obtain the point $B(2,6)$
(iii) On the $x-$axis, take 3 units to the left of the $y-$axis; and then on the $y-$axis, take 5 units above the $x-$axis.
Thus, we obtain the point $C(-3,5)$
(iv) On the $x-$axis, take 5 units to the left of the $y-$axis; and then on the $y-$axis, take 2 units above the $x-$axis.
Thus, we obtain the point $D(-5,2)$
(v) On the $x-$axis, take 2 units to the left of the $y-$axis; and then on the $y-$axis, take 3 units below the $x-$axis.
Thus, we obtain the point $E(-2,-3)$
(vi) On the $x-$axis, take 5 units to the left of the $y-$axis; and then on the $y-$axis, take 3 units below the $x-$axis.
Thus, we obtain the point $F(-5,-3)$
(vii) On the $x-$axis, take 5 units to the right of the $y-$axis; and then on the $y-$axis, take 4 units below the $x-$axis.
Thus, we obtain the point $G(5,-4)$
(viii) On the $x-$axis, take 3 units to the right of the $y-$axis; and then on the $y-$axis, take 3 units below the $x-$axis.
Thus, we obtain the point $H(3,-3)$

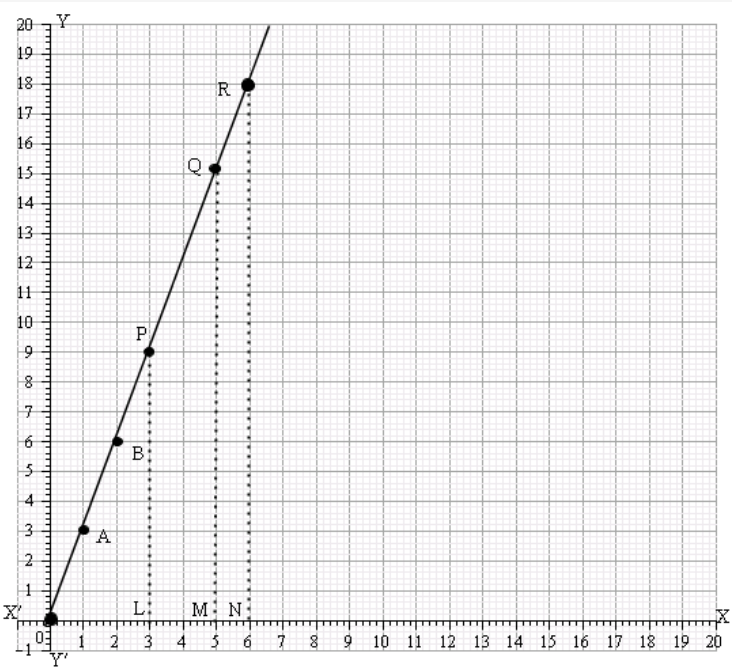
Q3.

Answer :

(a) The given function is $y=3x$. For some different values of x, the corresponding values of y are given below:

x	0	1	2
y	0	3	6

On a graph paper, plot the points $O(0,0)$, $A(1,3)$ and $B(2,6)$. Join them successively to obtain the required graph.



(b)

Reading off from the graph

(i) On the $x-$axis, take the point L at $x=3$.
Draw $LP \perp x-$axis, meeting the graph at P.
Clearly, $PL = 9$ units
$\therefore\ x=3 \Rightarrow y=9$

(ii) On the $x-$axis, take the point M at $x=5$.
Draw $MQ \perp x-axis$, meeting the graph at Q.
Clearly, $QM = 15$ units
$\therefore\ x=5 \Rightarrow y=15$

(iii) On the $x-$axis, take the point N at $x=6$.
Draw $RN \perp x-$axis, meeting the graph at R.
Clearly, $RN = 18$ units
$\therefore\ x=6 \Rightarrow y=18$

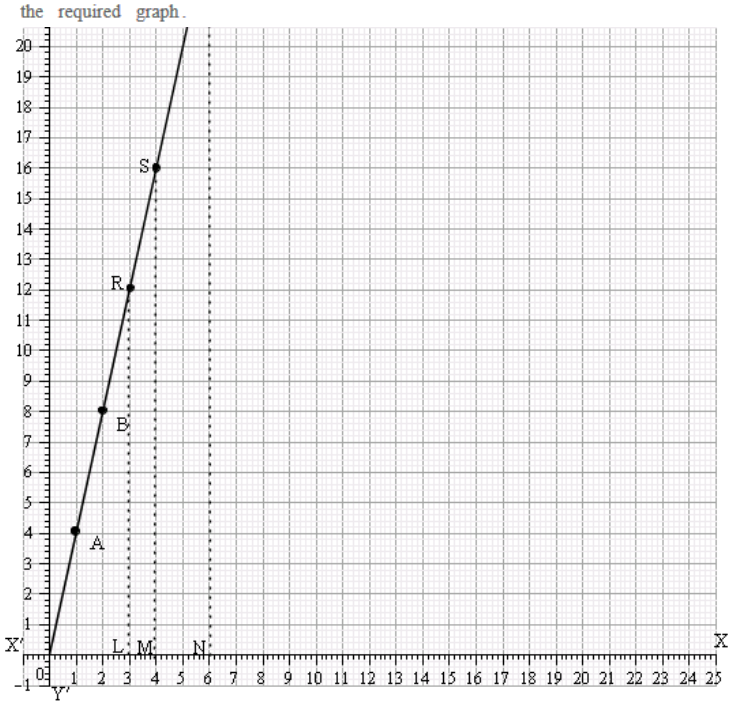
Q2.

Answer :

(a) The given function is $P=4x$. For some different values of x, the corresponding values of P are given below:

x	0	1	2
P	0	4	8

On a graph paper, plot the points $O(0,0)$, $A(1,4)$ and $B(2,8)$. Join them successively to obtain the required graph.



(b)

Reading off from the graph

(i) On the $x-$axis, take the point L at $x=3$.
Draw $LR \perp x-$axis, meeting the graph at R.
Clearly, $RL = 12$ units
$\therefore\ x=3 \Rightarrow P=12$

(ii) On the $x-$axis, take the point M at $x=4$.
Draw $MS \perp x-$axis, meeting the graph at S.
Clearly, $SM = 16$ units
$\therefore\ x=4 \Rightarrow P=16$

(iii) On the $x-$axis, take the point N at $x=6$.
Draw $NT \perp x-$axis, meeting the graph at T.
Clearly, $TN = 24$ units
$\therefore\ x=6 \Rightarrow P=24$

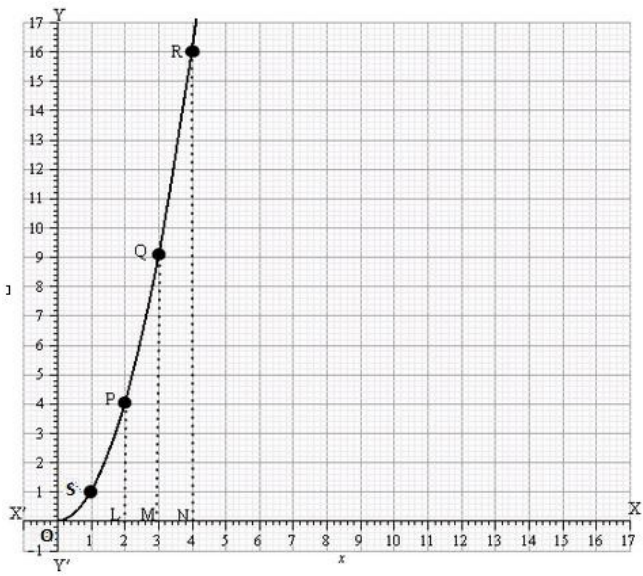
Q3.

Answer :

(a) The given function is $A = x^2$. For some different values of x, the corresponding values of A are given below:

x	0	1	2
A	0	1	4

On a graph paper, plot the points $O(0,0)$, $S(1,1)$ and $P(2,4)$. Join them successively to obtain the required graph.



(b)

Reading off from the graph

(i) On the $x-$axis, take the point L at $x = 2$.
Draw $LP \perp x-$axis, meeting the graph at P.
Clearly, $PL = 4$ units
$\therefore\ x = 2 \Rightarrow A = 4$
(ii) On the $x-$axis, take the point M at $x = 3$.
Draw $MQ \perp x-$axis, meeting the graph at Q.
Clearly, $QM = 9$ units
$\therefore\ x = 3 \Rightarrow A = 9$
(iii) On the $x-$axis, take the point N at $x = 4$.
Draw $RN \perp x-$axis, meeting the graph at R.
Clearly, $RN = 16$ units
$\therefore\ x = 4 \Rightarrow A = 16$

Graphs RS Aggarwal Class 8 Solutions Ex 25C

Q1.

Answer :

(a)
Since the signs of coordinates are $(+,+)$, the point $P(3,6)$ lies in the I quadrant.

Q2.

Answer :

(c) IIISince the signs of coordinates are $(-,-)$, the point $(-7,-1)$ lies in the III quadrant.

Q3.

Answer :

(d) IVSince the signs of the coordinates are $(+,-)$, the point $A(2,-3)$ lies in the IV quadrant

Q4.

Answer :

(b) IISince the signs of coordinates are $(-,+)$, the point $Q(-4,1)$ lies in the II quadrant.

Q5.

Answer :

(c) $y-$axisThe abscissa of a point is its distance from the $y-$axis.

Q6.

Answer :

(d) a line parallel to the $x-$axis The graph of $y=a$ is a line parallel to the $x-$axis.

Q7.

Answer :

(a) $x=0$The equation representing the $y-$axis is $x=0$.