

حل مشق 9.2

ہم کے گراف کھینچئے۔

1. $y = 3x$

x	-3	-2	-1	0	1	2	3
y	-9	-6	-3	0	3	6	9

$$\text{اگر } x = -2 \text{ ہو تو}$$

$$y = 3(-2) = -6$$

$$\text{اگر } x = 0 \text{ ہو تو}$$

$$y = 3(0) = 0$$

$$\text{اگر } x = 2 \text{ ہو تو}$$

$$y = 3(2) = 6$$

$$y = 3(3) = 9$$

$$\text{اگر } x = -3 \text{ ہو تو}$$

$$y = 3(-3) = -9$$

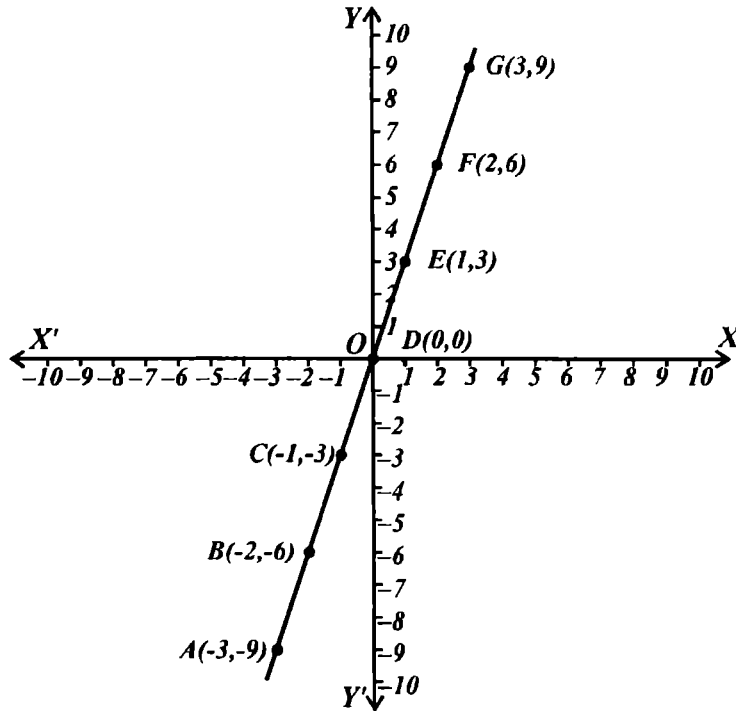
$$\text{اگر } x = -1 \text{ ہو تو}$$

$$y = 3(-1) = -3$$

$$\text{اگر } x = 1 \text{ ہو تو}$$

$$y = 3(1) = 3$$

$$\text{اگر } x = 3 \text{ ہو تو}$$



$$y = x + 7$$

x	-1	0	1	2	3
y	6	7	8	9	10

$$\text{اگر } x = 0 \text{ ہو تو}$$

$$y = 0 + 7 = 7$$

$$\text{اگر } x = 2 \text{ ہو تو}$$

$$y = 2 + 7 = 9$$

$$\text{اگر } x = -1 \text{ ہو تو}$$

$$y = -1 + 7 = 6$$

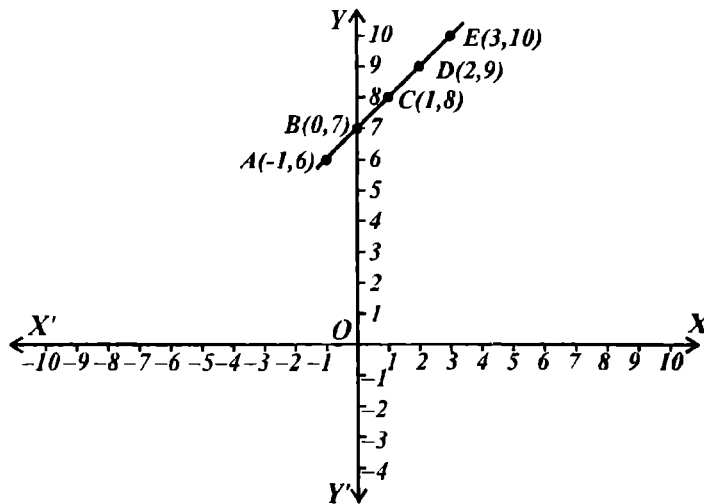
$$\text{اگر } x = +1 \text{ ہو تو}$$

$$y = 1 + 7 = 8$$

$$\text{اگر } x = 3 \text{ ہو تو}$$

$$y = 3 + 7 = 10$$

حل:



3. $y = 2x - 3$

x	-2	-1	0	1	2	3
y	-7	-5	-3	-1	1	3

$y = 2x - 3$ for $x = -1$

$y = 2x - 3$ for $x = -2$

$y = 2(-1) - 3 = -2 - 3 = -5$

$y = 2(-2) - 3 = -4 - 3 = -7$

$y = 2x - 3$ for $x = 1$

$y = 2x - 3$ for $x = 0$

$y = 2(1) - 3 = 2 - 3 = -1$

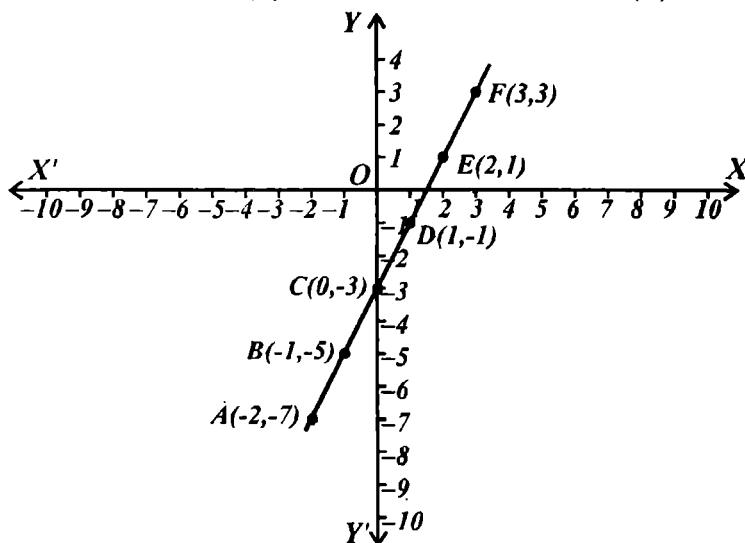
$y = 2(0) - 3 = 0 - 3 = -3$

$y = 2x - 3$ for $x = 3$

$y = 2x - 3$ for $x = 2$

$y = 2(3) - 3 = 6 - 3 = 3$

$y = 2(2) - 3 = 4 - 3 = 1$



$$y = 4x + 1$$

حل:

x	-2	-1	0	1	2
y	-7	-3	1	5	9

$$\text{اگر } x = -1 \text{ ہو تو}$$

$$y = 4(-1) + 1 = -4 + 1 = -3$$

$$\text{اگر } x = 1 \text{ ہو تو}$$

$$y = 4(1) + 1 = 4 + 1 = 5$$

$$\text{اگر } x = -2 \text{ ہو تو}$$

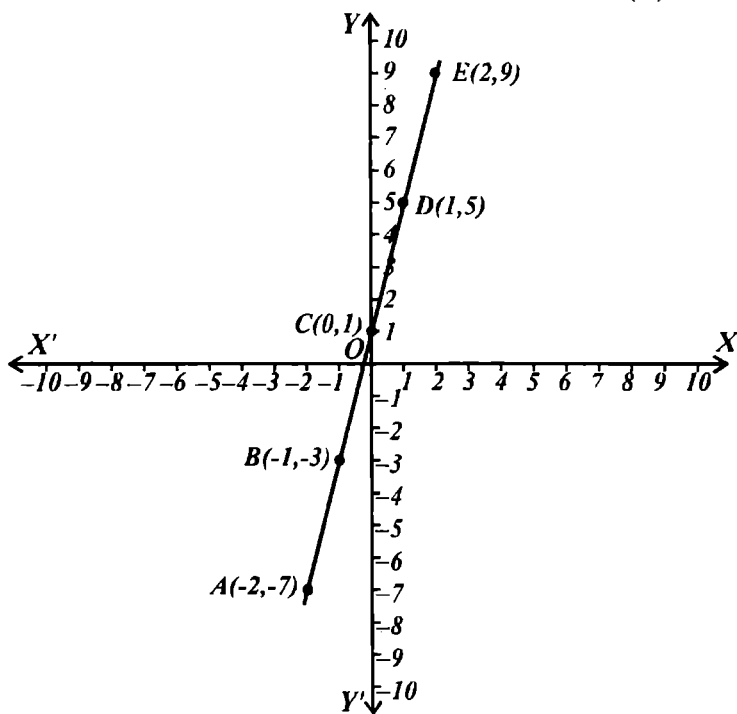
$$y = 4(-2) + 1 = -8 + 1 = -7$$

$$\text{اگر } x = 0 \text{ ہو تو}$$

$$y = 4(0) + 1 = 0 + 1 = 1$$

$$\text{اگر } x = 2 \text{ ہو تو}$$

$$y = 4(2) + 1 = 8 + 1 = 9$$



$$y = -\frac{x}{2} - \frac{3}{2}$$

حل:

x	-3	-2	-1	0	1	2
y	0	-0.5	-1	-1.5	-2	-2.5

$$\text{اگر } x = -2 \text{ ہو تو}$$

$$y = -\frac{(-2)}{2} - \frac{3}{2}$$

$$\text{اگر } x = -3 \text{ ہو تو}$$

$$y = -\frac{(-3)}{2} - \frac{3}{2}$$

$$= 1 - \frac{3}{2} = -0.5$$

$$= \frac{3}{2} - \frac{3}{2} =$$

$$\vec{y}_x = 0$$

$$\vec{y}_x = -1$$

$$y = -\frac{0}{2} - \frac{3}{2}$$

$$y = \frac{-(-1)}{2}$$

$$= 0 - \frac{3}{2} = -1.5$$

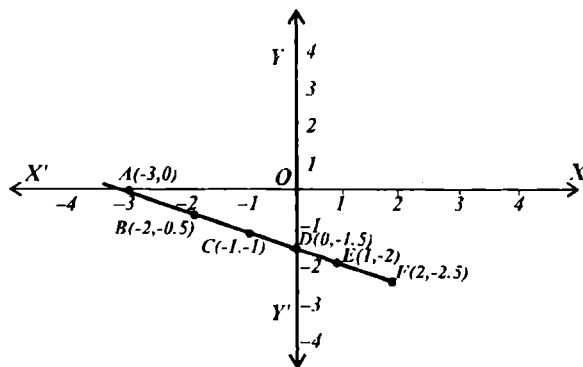
$$= \frac{1}{2} - \frac{3}{2} = -1$$

$$y = -\frac{2}{2} - \frac{3}{2}$$

$$y = \frac{1}{2}$$

$$= -1 - \frac{3}{2} = -2.5$$

$$= \frac{-1}{2} - \frac{3}{2} = -$$



6. $y = x - 1$

x	-1	0	1
y	-2	-1	0

$$\vec{y}_x = 0$$

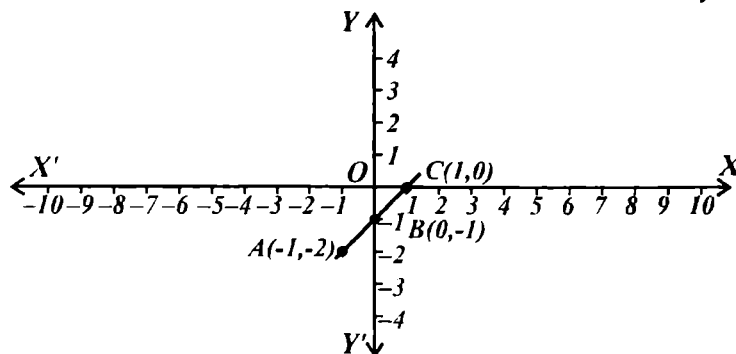
$$\vec{y}_x = -1$$

$$y = 0 - 1 = -1$$

$$y = -1 - 1 = -$$

$$\vec{y}_x = 1$$

$$y = 1 - 1 =$$



$$y = 2x - 3$$

حل:

x	-3	-2	-1	0	1	2	3
y	-9	-7	-5	-3	-1	1	3

اگر $x = -2$ ہو تو

$$y = 2(-2) - 3 = -4 - 3 = -7$$

اگر $x = 0$ ہو تو

$$y = 2(0) - 3 = 0 - 3 = -3$$

اگر $x = 2$ ہو تو

$$y = 2(2) - 3 = 4 - 3 = 1$$

اگر $x = -3$ ہو تو

$$y = 2(-3) - 3 = -6 - 3 = -9$$

اگر $x = -1$ ہو تو

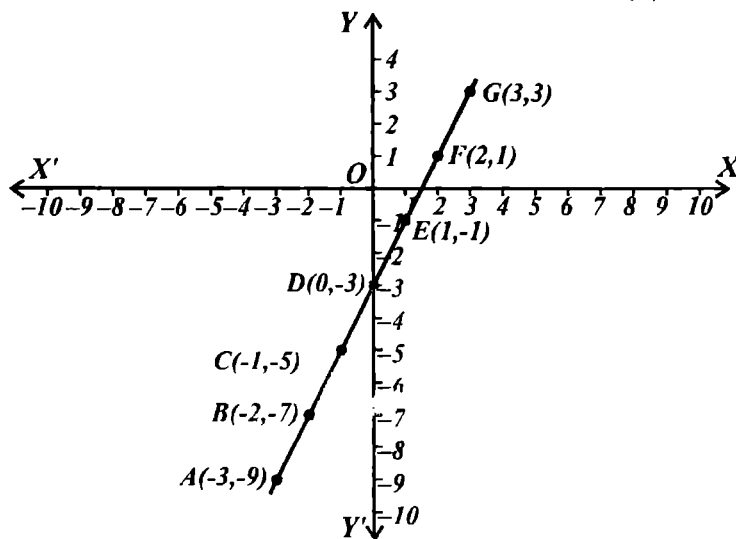
$$y = 2(-1) - 3 = -2 - 3 = -5$$

اگر $x = 1$ ہو تو

$$y = 2(1) - 3 = 2 - 3 = -1$$

اگر $x = 3$ ہو تو

$$y = 2(3) - 3 = 6 - 3 = 3$$



$$y = 3x + 5$$

حل:

x	-2	-1	0
y	-1	2	5

اگر $x = -1$ ہو تو

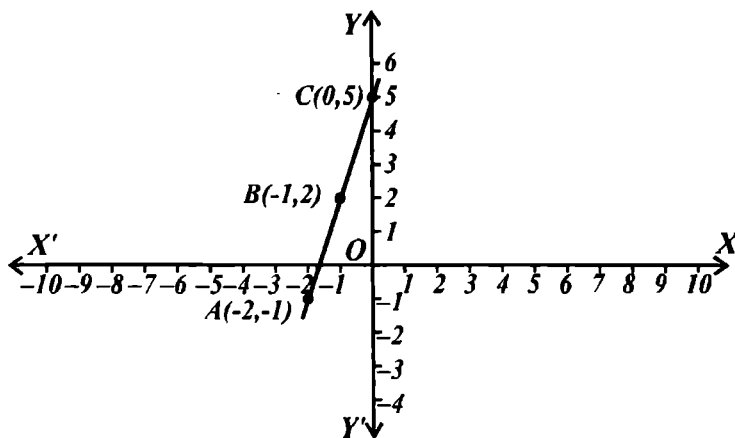
$$y = 3(-1) + 5 = -3 + 5 = 2$$

اگر $x = -2$ ہو تو

$$y = 3(-2) + 5 = -6 + 5 = -1$$

اگر $x = 0$ ہو تو

$$y = 3(0) + 5 = 0 + 5 = 5$$



9. $y = \frac{x}{2}$

x	4	6	8	10	12
y	2	3	4	5	6

چون $x = 6$ اگر

$$y = \frac{6}{2} = 3$$

چون $x = 10$ اگر

$$y = \frac{10}{2} = 5$$

چون $x = 4$ اگر

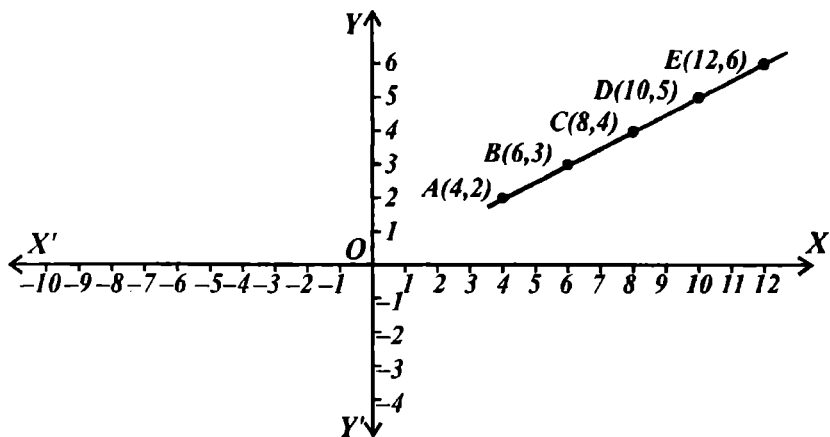
$$y = \frac{4}{2} = 2$$

چون $x = 8$ اگر

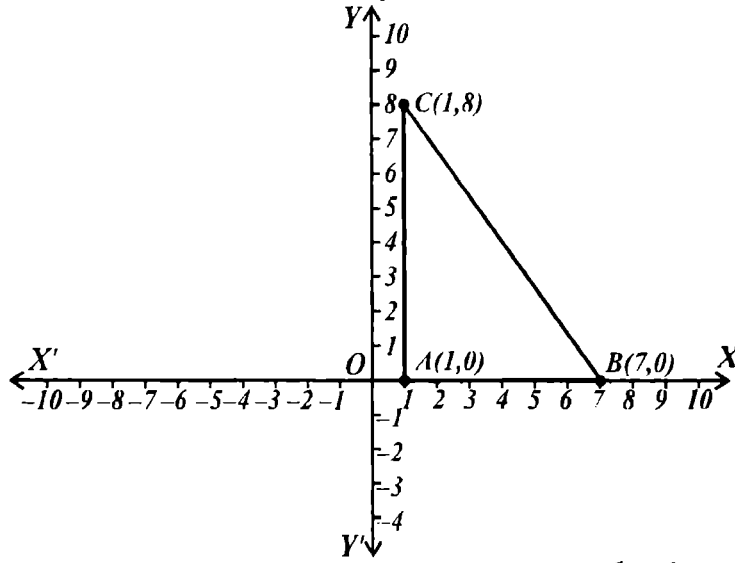
$$y = \frac{8}{2} = 4$$

چون $x = 12$ اگر

$$y = \frac{12}{2} = 6$$

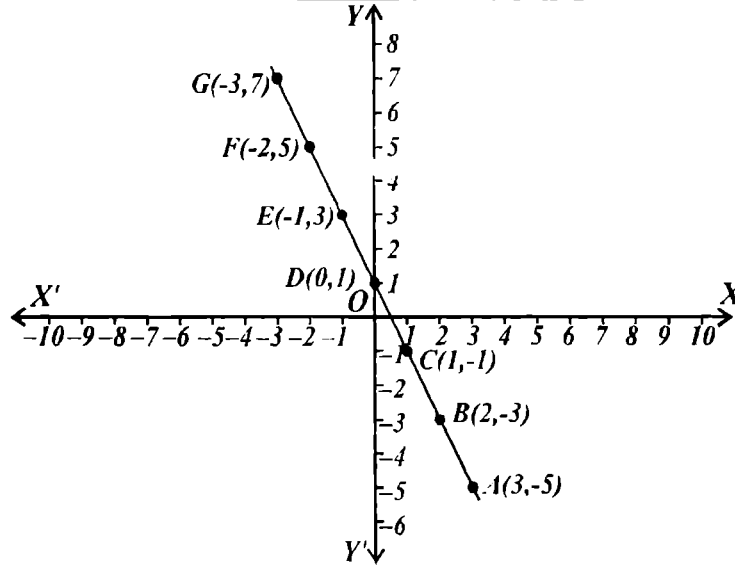


10. نقاط $A(1,0)$, $B(7,0)$, $C(1,8)$ کے گراف کھینچئے۔

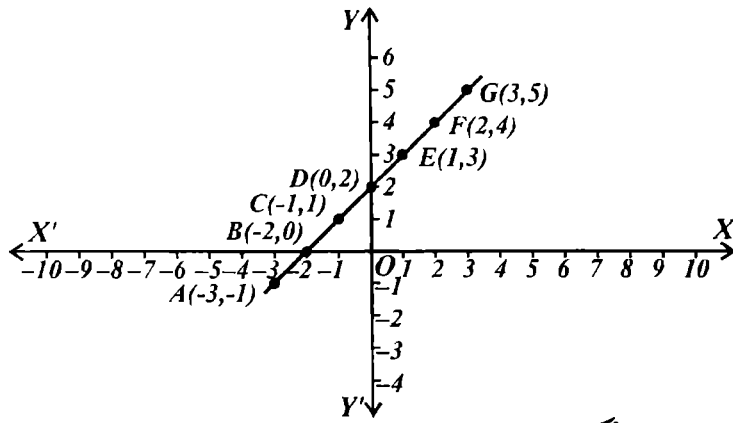


11. دیئے گئے جدولوں کے گراف کھینچئے۔

x	3	2	1	0	-1	-2	-3
y	-5	-3	-1	1	3	5	7

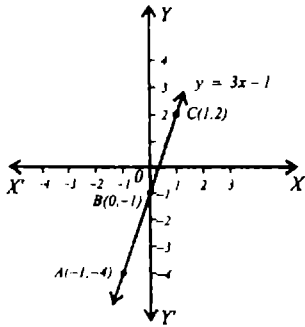


x	-3	-2	-1	0	1	2	3
y	-1	0	1	2	3	4	5



دیئے گئے گراف کی مدد سے فنکشن کی ڈومین اور رینج معلوم کیجیے۔

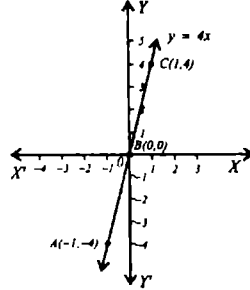
12.



$$\text{ڈومین} = \{-1, 0, 1\}$$

$$\text{رینج} = \{-4, -1, 2\}$$

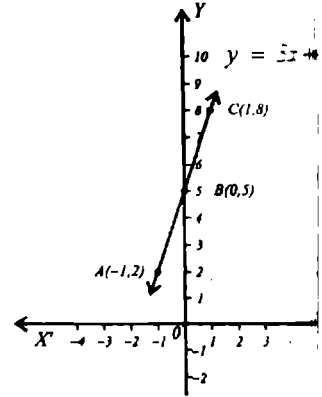
13.



$$\text{ڈومین} = \{-1, 0, 1\}$$

$$\text{رینج} = \{-4, 0, 4\}$$

14.



$$\text{ڈومین} = \{-1, 0, 1\}$$

$$\text{رینج} = \{2, 5, 8\}$$