



Mathematics-9

Unit 8 – Review Exercise 8

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Q.1 Choose the correct answer

- (i) If $(x-1, y+1) = (0, 0)$, then (x, y) is (U.B)
(LHR 2014, 17, GRW 2013, SGD 2013, 17)
 (a) (1,-1) (b) (-1,1)
 (c) (1,1) (d) (-1,-1)
- (ii) If $(x, 0) = (0, y)$ Then (x, y) is (U.B)
 (a) (0,1) (b) (1,0)
 (c) (0,0) (d) (1,1)
- (iii) Point $(2, -3)$ lies in quadrant (K.B)
(GRW 2017, FSD 2016, SWL 2013, SGD 2014, 15, 17, BWP 2014, 17, D.G.K 2013, 15, 16, 17)
 (a) I (b) II
 (c) III (d) IV
- (iv) Point $(-3, -3)$ lies in quadrant (K.B)
(LHR 2016, 17, GRW 2016, SWL 2014, 16, 17, MTN 2016, BWP 2013, D.G.K 2015, 17)
 (a) I (b) II
 (c) III (d) IV
- (v) If $y = 2x + 1, x = 2$ Then y is (A.B)
(FSD 2013, MTN 2013, 14, 15, 17, BWP 2013, 14, RWP 2014, D.G.K 2014)
 (a) 2 (b) 3
 (c) 4 (d) 5
- (vi) Which order pair satisfy the equation $y = 2x$ (A.B)
(LHR 2016, GRW 2014, RWP 2014, MTN 2016, SWL 2017, FSD 2013, 17, SGD 2016, D.G.K 2016)
 (a) (1,2) (b) (2,1)
 (c) (2,2) (d) (0,1)

ANSWER KEYS

1	2	3	4	5	6
a	c	d	c	d	a

Q.2 Identify the following statement as true or false.

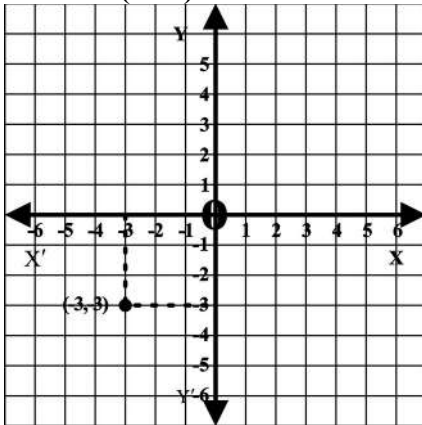
- | | | |
|----|---|-------|
| 1. | The point O (0,0) is in quadrant II. | False |
| 2. | The point p (2,0) lies on x-axis. | True |
| 3. | The graph of $x = -2$ is a vertical line. | True |
| 4. | $3-y = 0$ is a horizontal line. | True |

- 5. The point Q (-1,2) is in quadrant III. False
- 6. The point R (-1,-2) is in quadrant IV. False
- 7. $y = x$ is a line on which origin lies. True
- 8. The point p (1,1) lies on the line $x + y = 0$. False
- 9. The point S (1,-3) lies in quadrant III. False
- 10. The point R (0,1) lies on the x-axis. False

Q.3 Draw the following points on the graph paper

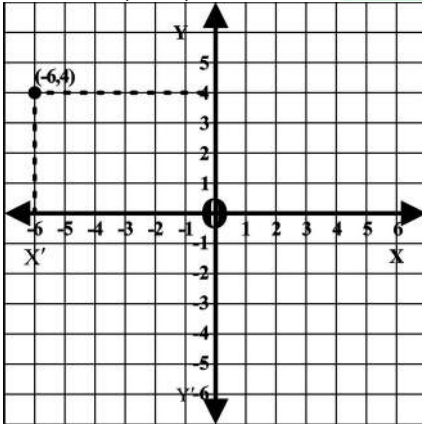
(i) $(-3, -3) \Rightarrow$

(K.B)



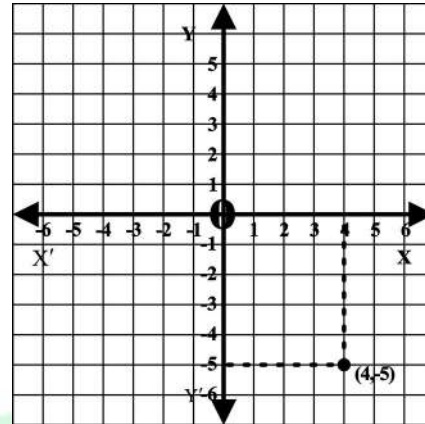
(ii) $(-6, 4) \Rightarrow$

(K.B)



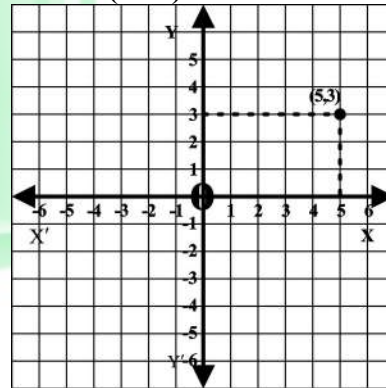
(iii) $(4, -5) \Rightarrow$

(K.B)



(iv) $(5, 3)$

(K.B)

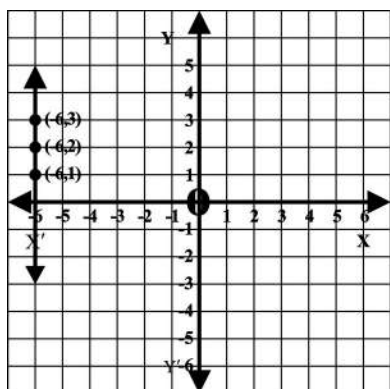


Q.4 Draw the graph of the following

(i)

$$x = -6$$

x	-6	-6	-6
y	1	2	3

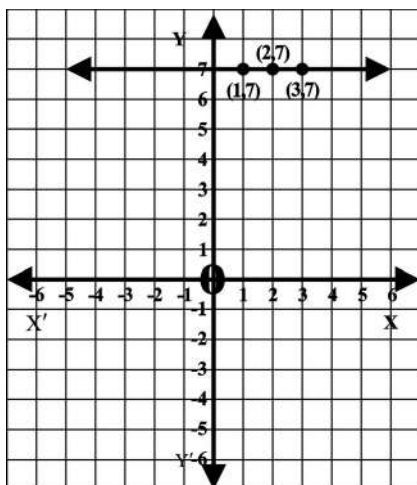


(ii)

$$y = 7$$

(K.B)

x	1	2	3
y	7	7	7



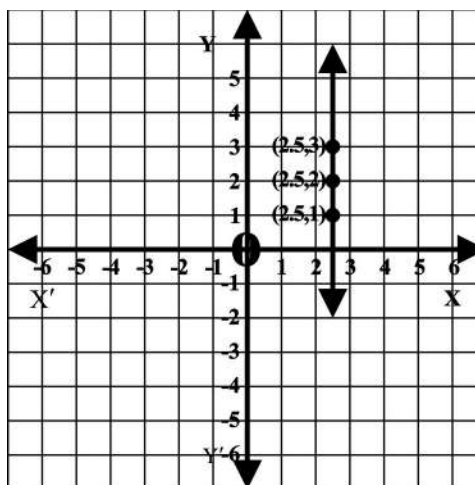
(iii)

$$x = \frac{5}{2}$$

(K.B)

$$x = 2.5$$

x	2.5	2.5	2.5
y	1	2	3



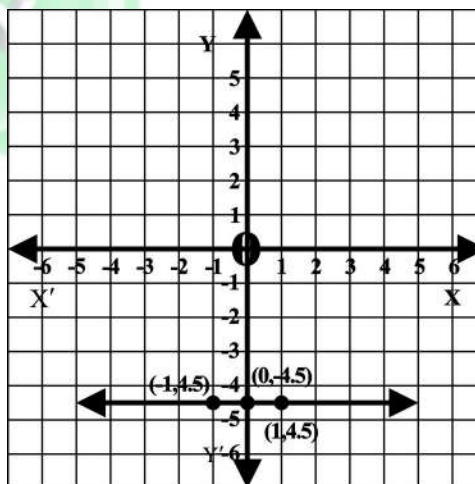
(iv)

$$y = -\frac{9}{2}$$

(K.B)

$$y = -4.5$$

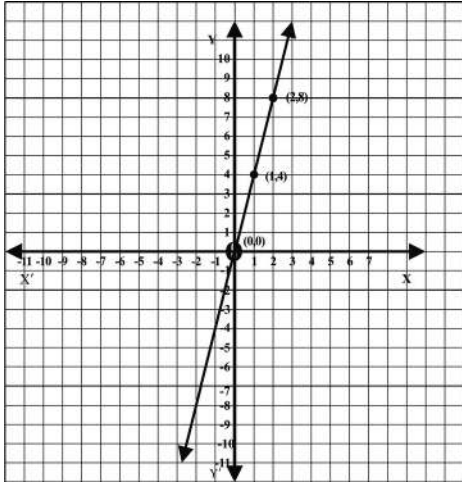
x	-1	0	1
y	-4.5	-4.5	-4.5



(v)

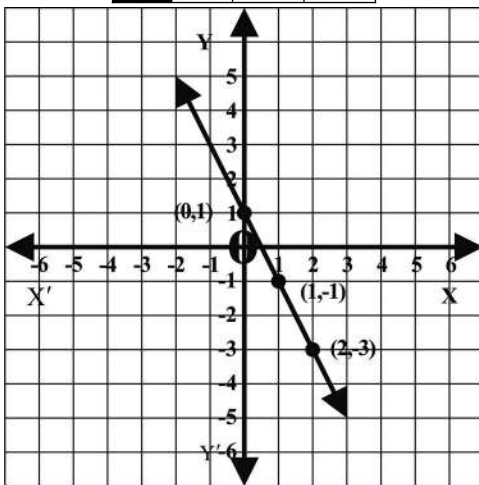
$$y = 4x$$

x	0	1	2
y = 4x	$4 \times 0 = 0$	$4 \times 1 = 4$	$4 \times 2 = 8$



(vi) $y = -2x + 1$

x	0	1	2
y	1	-1	-3



Q.5 Draw the following graph

(i) $y = 0.62x$

x	$y = 0.62x$	xy
1	$0.62 \times 1 = 0.62$	(1, 0.62)
2	$0.62 \times 2 = 1.24$	(2, 1.24)
3	$0.62 \times 3 = 1.86$	(3, 1.86)

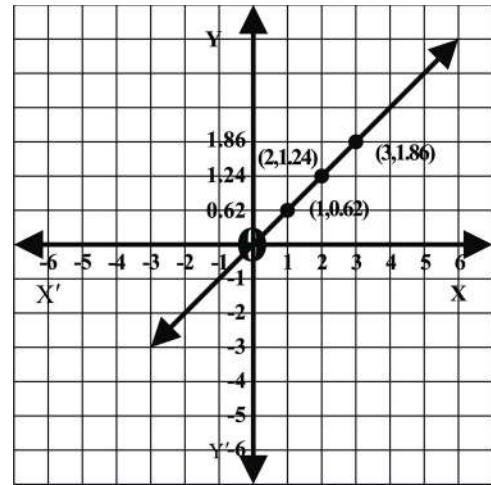
Scale

Along x -axis

1 Big Square = 1 Unit

Along y -axis

1 Big Square = 0.62 Units



(ii) $y = 2.5x$

x	$y = 2.5x$	(x, y)
1	$2.5(1) = 2.5$	(1, 2.5)
2	$2.5(2) = 5.0$	(2, 5)
3	$2.5(3) = 7.5$	(3, 7.5)

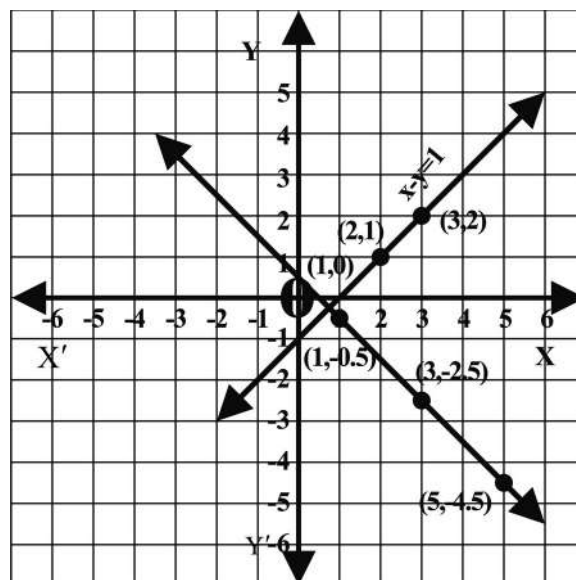
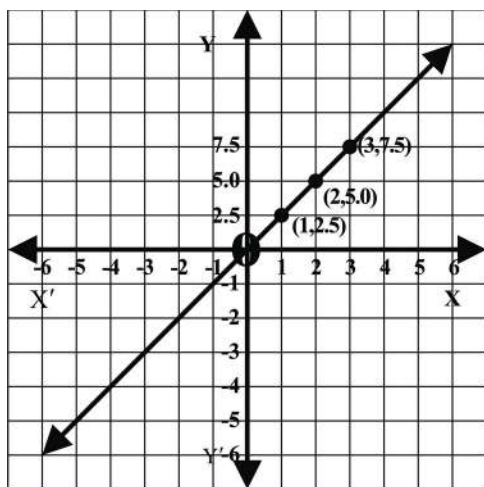
Scale

Along x -axis

1 Big Square = 1 Unit

Along y -axis

1 Big Square = 2.5 Units



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

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

or $y = x - 1$ $y = \frac{1 - 2x}{2}$

Point of intersection is a solution set

Solution Set = $\left\{ \left(\frac{3}{4}, -\frac{1}{4} \right) \right\}$

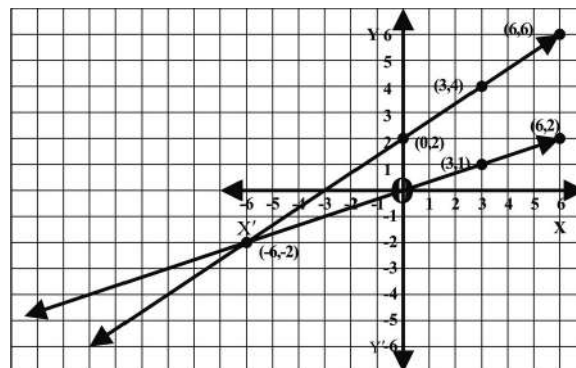
x	$y = x - 1$	
1	$1 - 1 = 0$	(1, 0)
2	$2 - 1 = 1$	(2, 1)
3	$3 - 1 = 2$	(3, 2)

(ii) $x = 3y$

$y = \frac{1}{3}x$

x	$y = \frac{1 - x}{2}$	
1	$\frac{1 - 1}{2} = 0$	$\left(1, \frac{-1}{2} \right)$
3	$\frac{1 - 6}{2} = \frac{-5}{2}$	$\left(3, \frac{-5}{2} \right)$
5	$\frac{1 - 10}{2} = \frac{-9}{2}$	$\left(5, \frac{-9}{2} \right)$

x	$y = \frac{1}{3}x$	(x, y)
3	$\frac{1}{3} \times 3 = 1$	(3, 1)
6	$\frac{1}{3} \times 6 = 2$	(6, 2)



$$2x - 3y = -6$$

$$2x + 6 = 3y$$

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

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

Point of intersection is a solution set

$$\text{Solution Set} = \{(-6, -2)\}$$

x	$y = \frac{2x+6}{3}$	
0	$\frac{2(0)+6}{3} = \frac{6^2}{3} = 2$	(0, 2)
3	$\frac{2(3)+6}{3} = \frac{12^4}{3} = 4$	(3, 4)
6	$\frac{2(6)+6}{3} = \frac{18^6}{3} = 6$	(6, 6)

(iii) $\frac{1}{3}(x+y) = 2$ $\frac{1}{2}(x-y) = -1$

$$x + y = 6 \quad x - y = -2$$

$$y = 6 - x \quad x + 2 = y$$

x	$y = 6 - x$	(x, y)
1	$6 - 1 = 5$	(1, 5)
2	$6 - 2 = 4$	(2, 4)
3	$6 - 3 = 3$	(3, 3)

x	$y = x + 2$	(x, y)
1	$1 + 2 = 3$	(1, 3)
2	$2 + 2 = 4$	(2, 4)
3	$3 + 2 = 5$	(3, 5)

Point of intersection is a solution set

$$\text{Solution Set} = \{(2, 4)\}$$

