

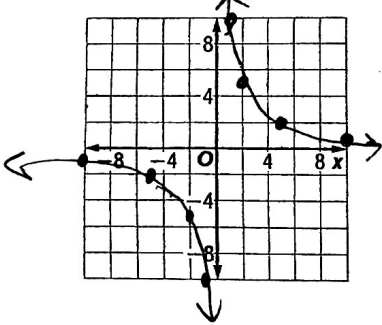
12-1 Skills Practice

Inverse Variation

Graph each variation if y varies inversely as x .

1. $y = 2$ when $x = 5$

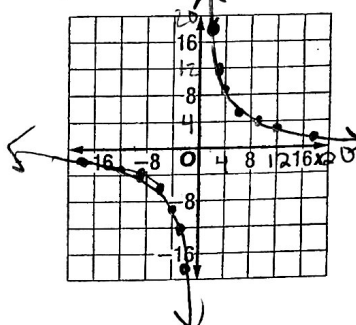
$$xy = 10$$



x	y
1	10
2	5
5	2
10	1
-1	-10
-2	-5
-5	-2
-10	-1

2. $y = -6$ when $x = -6$

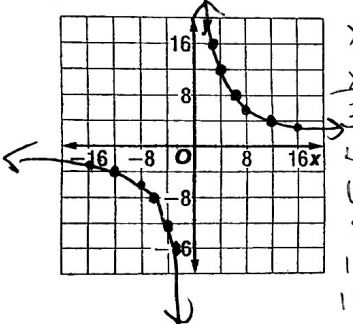
$$xy = 36$$



x	y
1	36
2	18
3	12
4	9
6	6
9	4
12	3
18	2
36	1
-1	-36
-2	-18
-3	-12
-4	-9
-6	-6
-9	-4
-12	-3
-18	-2
-36	-1

3. $y = -4$ when $x = -12$

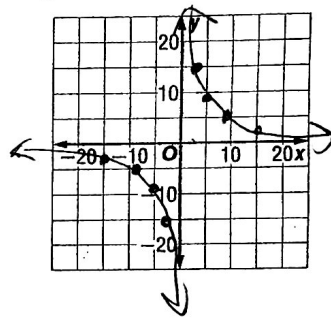
$$xy = 48$$



x	y
3	16
4	12
6	8
8	6
12	4
16	3
-3	-16
-4	-12
-6	-8
-8	-6
-12	-4
-16	-3

4. $y = 15$ when $x = 3$

$$xy = 45$$



x	y
3	15
5	9
9	5
15	3
-3	-15
-5	-9
-9	-5
-15	-3

Write an inverse variation equation that relates x and y . Assume that y varies inversely as x . Then solve.

5. If $y = 4$ when $x = 8$,
find y when $x = 2$.

$$xy = 32$$

$$y = 16$$

6. If $y = -7$ when $x = 3$,
find y when $x = -3$.

$$xy = -21$$

$$y = 7$$

7. If $y = -6$ when $x = -2$,
find y when $x = 4$.

$$xy = 12$$

$$y = 3$$

8. If $y = -24$ when $x = -3$,
find x when $y = -6$.

$$xy = 72$$

$$x = -12$$

9. If $y = 15$ when $x = 1$,
find x when $y = -3$.

$$xy = 15$$

$$x = -5$$

10. If $y = 48$ when $x = -4$,
find y when $x = 6$.

$$xy = -192$$

$$y = -32$$

11. If $y = 34$ when $x = 4$,
find y when $x = -17$.

$$xy = 136$$

$$y = -8$$

12. If $y = 72$ when $x = -3$,
find y when $x = 36$.

$$xy = -216$$

$$y = -6$$

13. If $y = 4$ when $x = 1.5$,
find x when $y = 5$.

$$xy = 6$$

$$x = 1.2$$

14. If $y = 20$ when $x = 5.2$,
find x when $y = 10$.

$$xy = 104$$

$$x = 10.4$$

15. If $y = -4$ when $x = \frac{1}{2}$, find x when $y = 2$.

$$xy = -2$$

$$x = -1$$

16. If $y = 12$ when $x = \frac{1}{3}$, find x when $y = -8$.

$$xy = 4$$

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