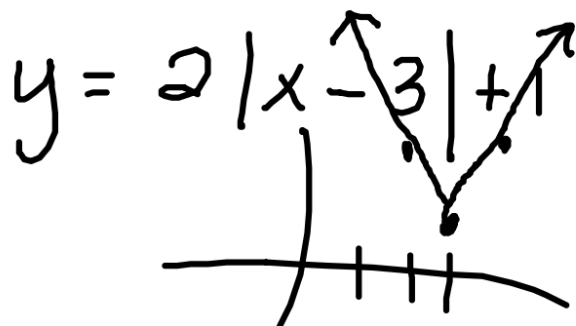


Warm Up

1. Solve

$$\begin{aligned} 5 - |4x + 3| &= 1 \\ -5 & \qquad \qquad \qquad -5 \\ -|4x + 3| &= -4 \end{aligned}$$

2. Graph



$$|4x + 3| = 4$$

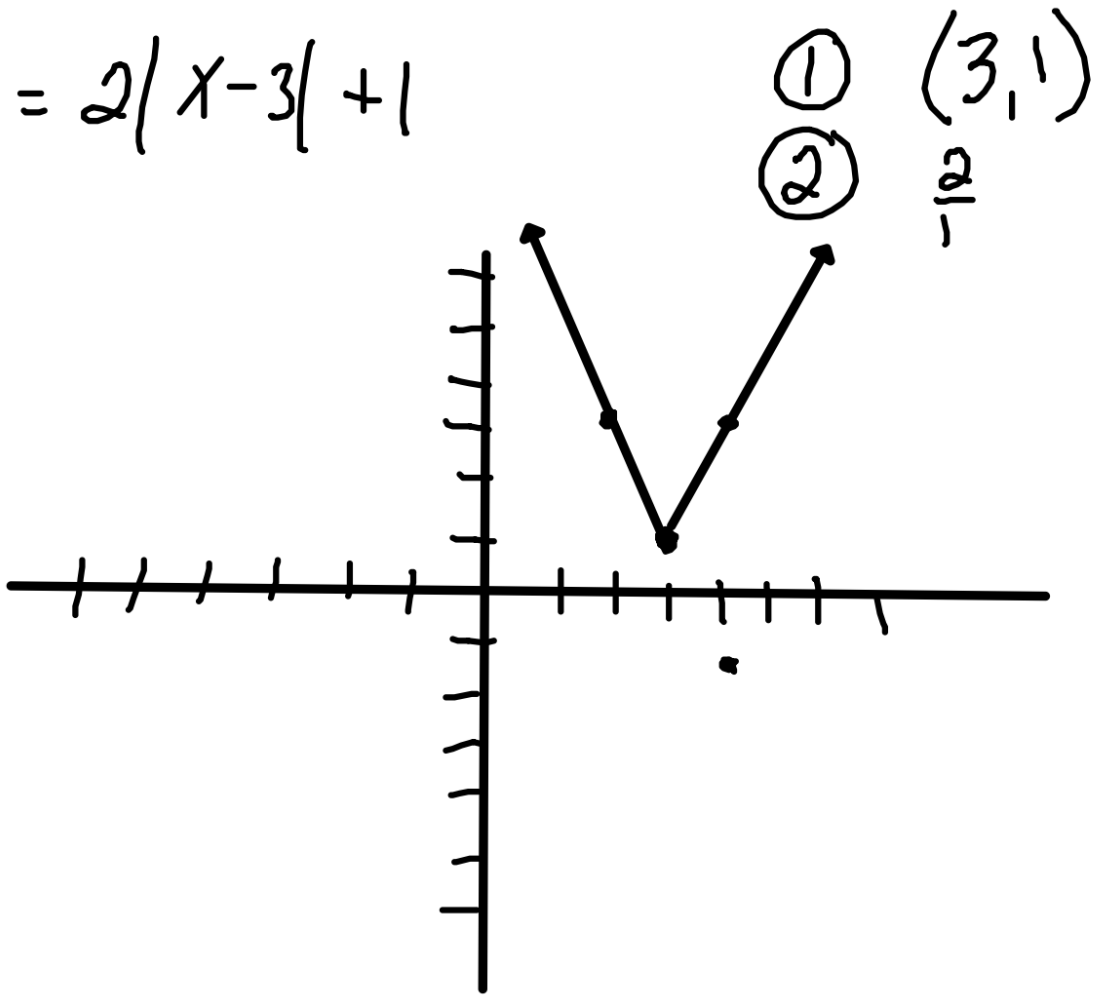
$$\begin{aligned} 4x + 3 &= 4 \\ -3 & \quad -3 \end{aligned}$$

$$\begin{aligned} 4x &= 1 \\ x &= \frac{1}{4} \quad \checkmark \end{aligned}$$

$$\begin{aligned} 4x + 3 &= -4 \\ -3 & \quad -3 \end{aligned}$$

$$\begin{aligned} 4x &= -7 \\ x &= -\frac{7}{4} \quad \checkmark \end{aligned}$$

$$y = 2|x - 3| + 1$$



$$y = a|x-h|+k$$

GRAPHING FUNCTIONS Graph the function. Compare the graph with the graph of $y = |x|$.

3. $y = |x| - 7$

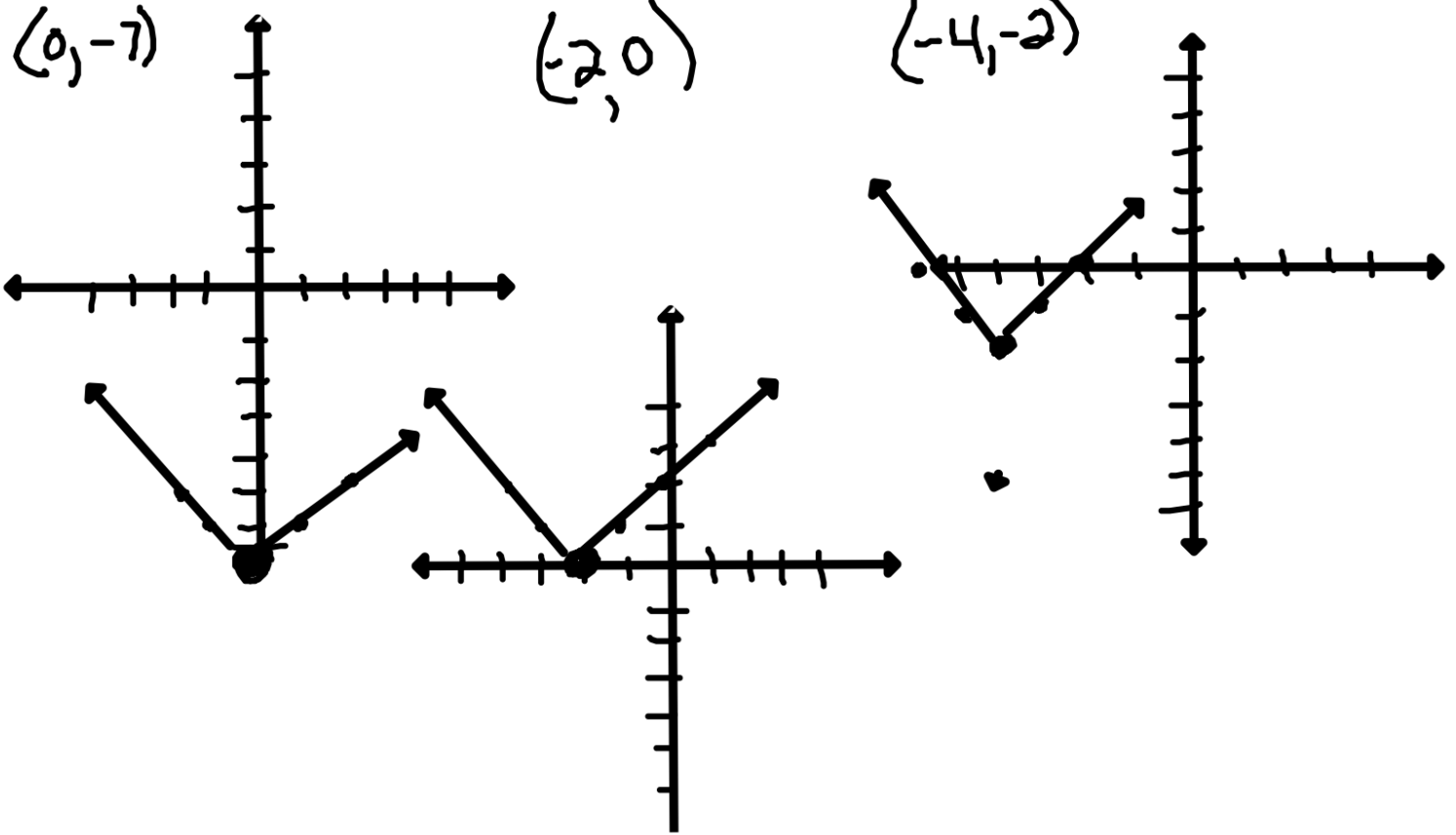
4. $y = |x + 2|$

5. $y = |x + 4| - 2$

$(0, -7)$

$(-2, 0)$

$(-4, -2)$

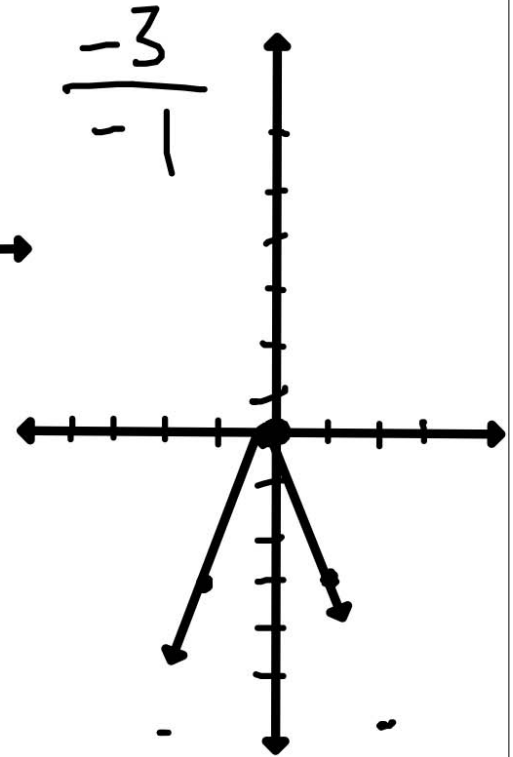
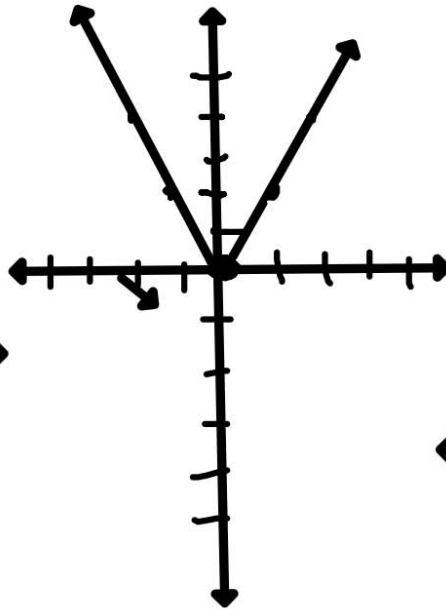
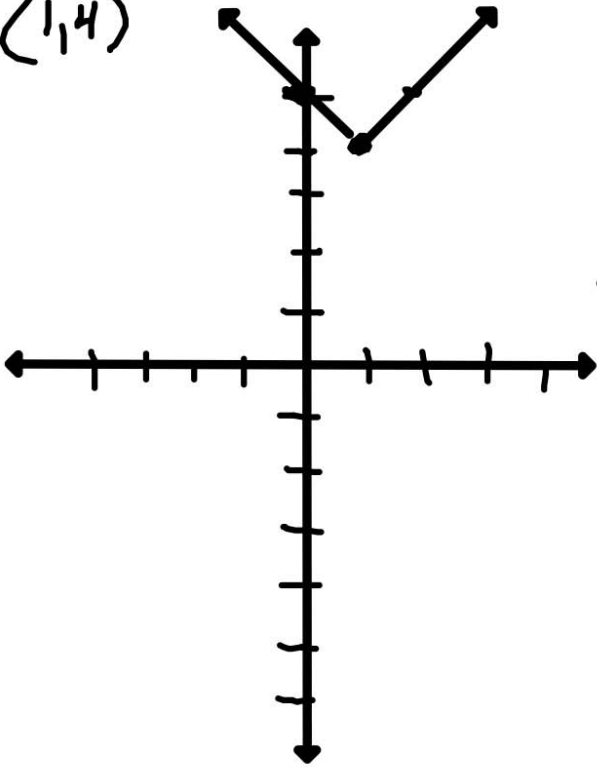


6. $f(x) = |x - 1| + 4$

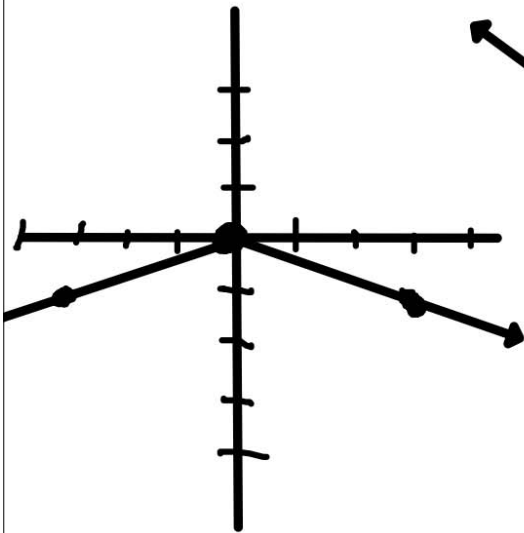
7. $f(x) = 2|x|$

8. $f(x) = -3|x|$

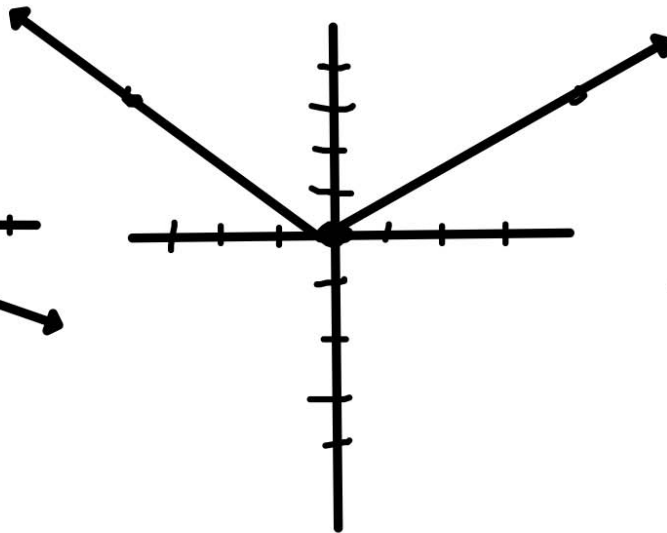
(1, 4)



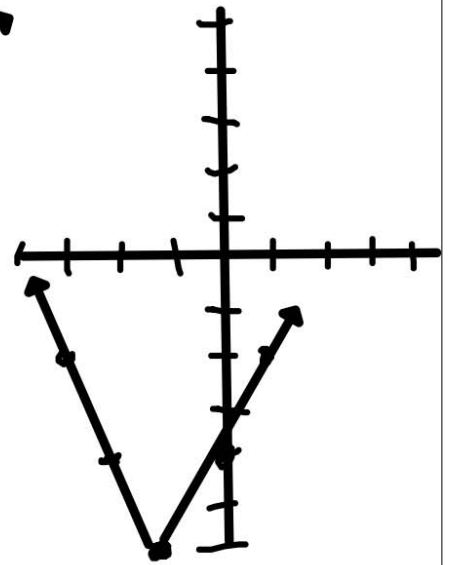
9. $y = -\frac{1}{3}|x|$



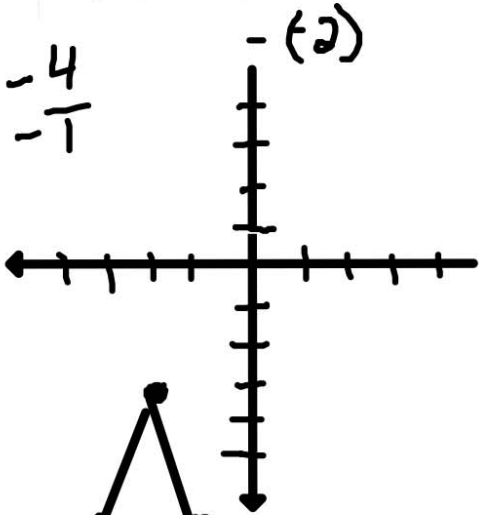
10. $y = \frac{3}{4}|x|$



11. $y = 2|x + 1| - 6$



12. $f(x) = -4|x + 2| - 3$

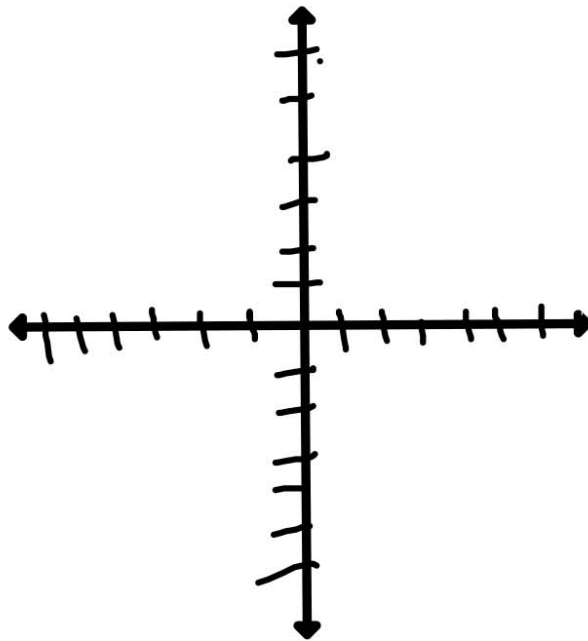


$y = a|x - h| + k$

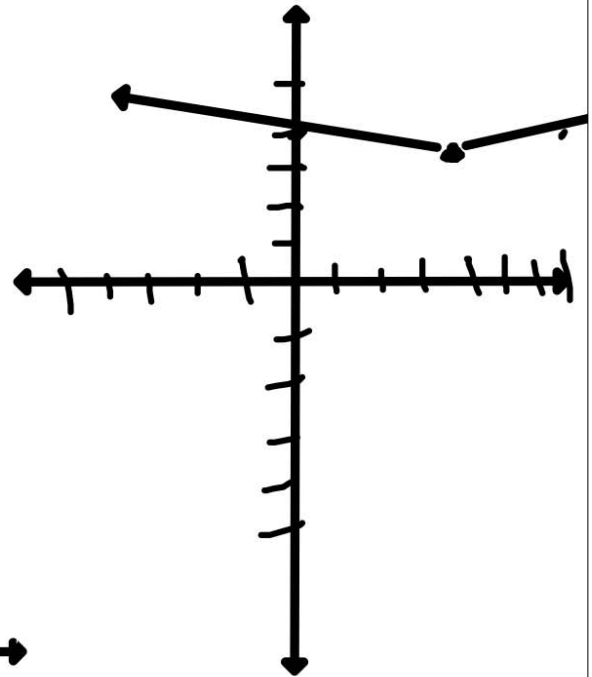
(h, k)

$(-2, -3)$

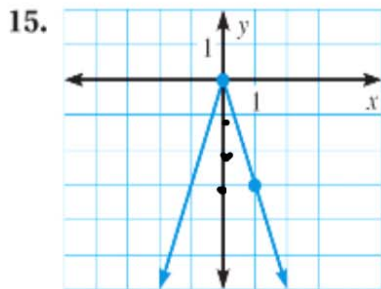
13. $f(x) = -\frac{1}{2}|x - 1| + 5$



14. $f(x) = \frac{1}{4}|x - 4| + 3$

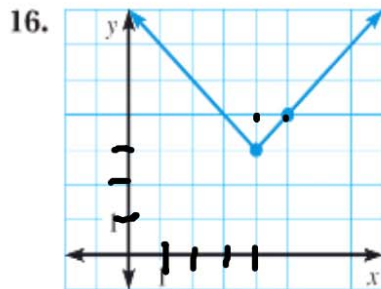


WRITING EQUATIONS Write an equation of the graph.



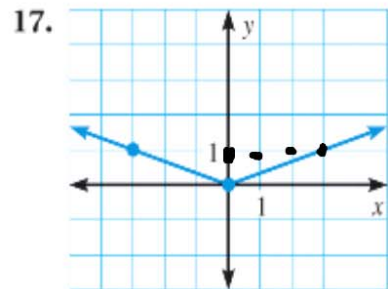
$$y = a|x-h|+k$$

$$y = -3|x|$$



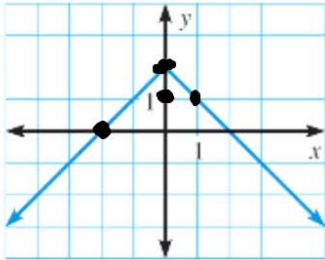
$$y =$$

$$|x-4|+3$$

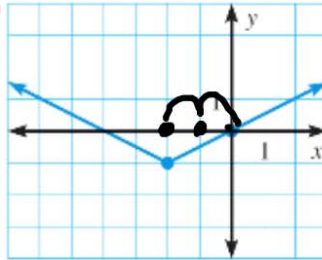


$$y = \frac{1}{3}|x|$$

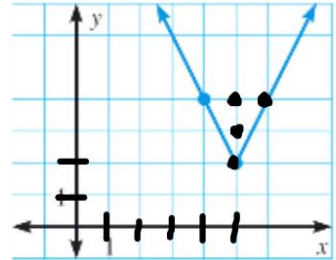
18.



19.



20.



$$y = -|x| + 2$$

$$y = a|x - h| + k$$

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

$$y = 2|x - 5| + 2$$