

18. Solve the system by graphing

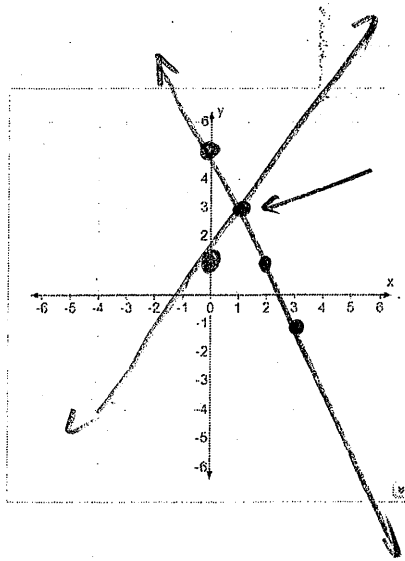
$m = \frac{-2}{1}$
 $y_{int} = 5$

$$\begin{cases} y = 5 - 2x \\ 3y = 6x + 3 \end{cases}$$

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

$y = 2x + 1$

$y_{int} = 1$



The solution to the system is the point (1, 3).

Graph each inequality.

19. $y \geq 4x - 3$

20. $y \leq \frac{3}{4}x$

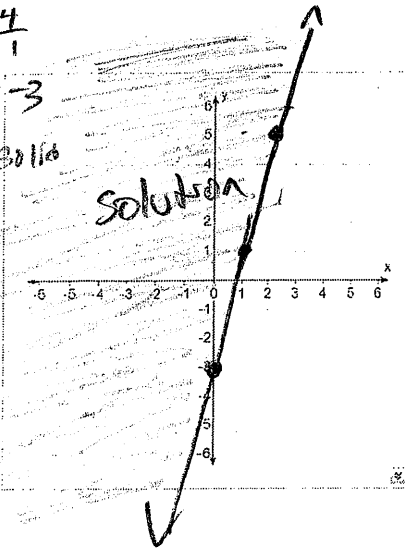
21. Graph the system of inequalities

$m = \frac{4}{1}$

$y_{int} = -3$

$\geq \leftarrow$ solid

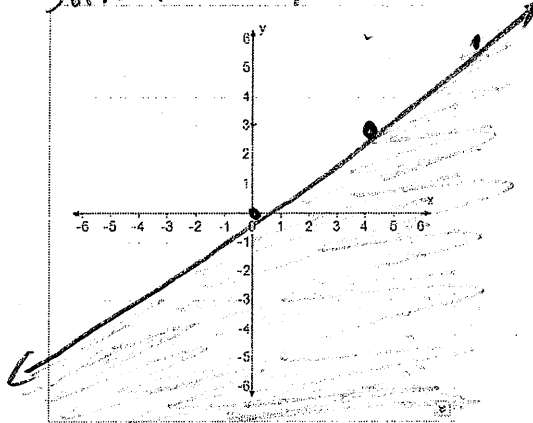
Solution



Solid line

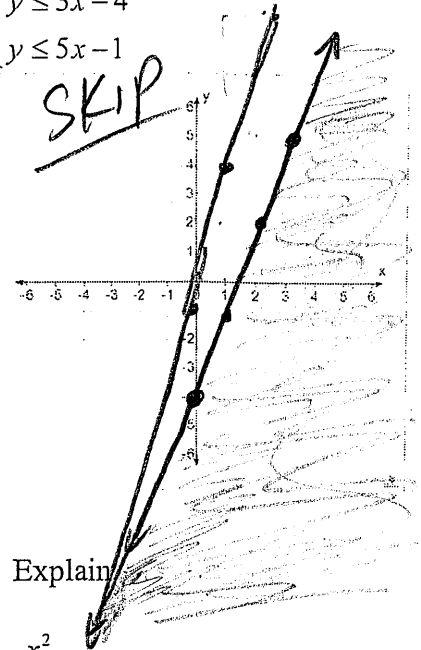
$m = \frac{3}{4}$

$y_{int} = 0$



$$\begin{cases} y \leq 3x - 4 \\ y \leq 5x - 1 \end{cases}$$

SKIP



Tell whether the graph of each function opens upward or downward. Explain.

22. $y = 3 - x^2$

23. $y = 3x^2 + 5x$

24. $y = -x^2$

UP

UP

Down

25. Find the zeros, axis of symmetry, vertex, domain and range of the parabola shown.

Zeros:

$(2.5, 0)$ $(5.5, 0)$

Axis of Symmetry:

$x = 4$

Vertex:

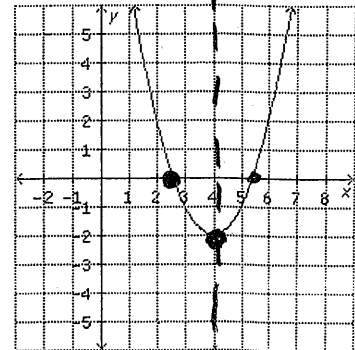
$(4, -2)$

Domain:

all Real #s

Range:

$y \geq -2$



26. Find the axis of symmetry of the parabola represented by $y = -3x^2 + 6x + 5$.

$\frac{-6}{2(-3)} = 1 = x$
 axis of symmetry