

Solving Inequalities

Graph each inequality.

10. $x + y > -5$

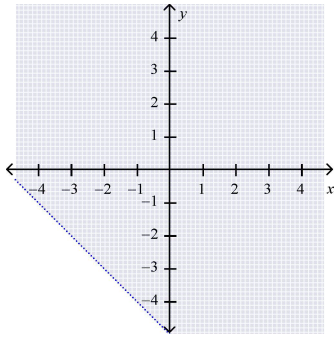
SOLUTION:

$$x + y > -5$$

$$x - x + y > -5 - x$$

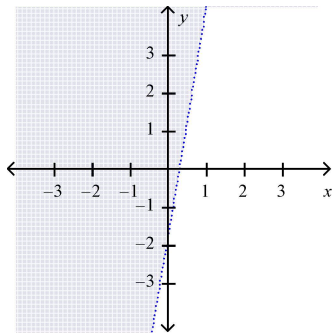
$$y > -x - 5$$

ANSWER:



11. $y > 6x - 2$

ANSWER:



12. $y + 1 < 4$

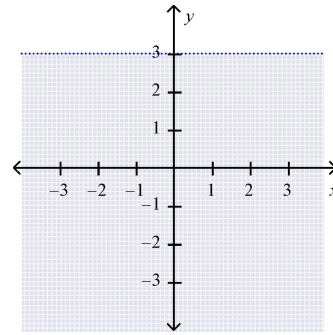
SOLUTION:

$$y + 1 < 4$$

$$y + 1 - 1 < 4 - 1$$

$$y < 3$$

ANSWER:



13. $y - 2 < 3x$

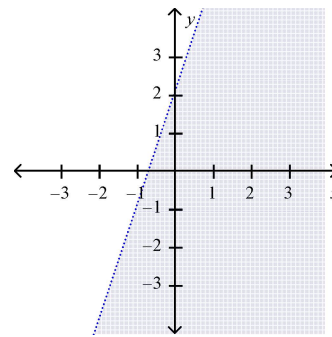
SOLUTION:

$$y - 2 < 3x$$

$$y - 2 + 2 < 3x + 2$$

$$y < 3x + 2$$

ANSWER:



14. $x - 6y + 3 > 0$

SOLUTION:

$$x - 6y + 3 > 0$$

$$x - 6y + 3 - 3 > 0 - 3$$

$$x - 6y > -3$$

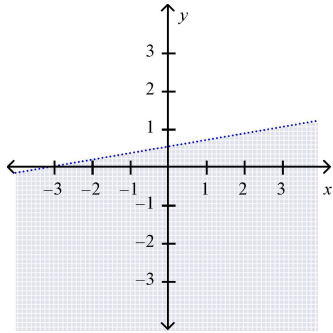
$$x - x - 6y > -3 - x$$

$$\frac{-6y}{-6} > \frac{-3 - x}{-6}$$

$$y < \frac{3}{6} + \frac{x}{6}$$

$$y < \frac{1}{6}x + \frac{1}{2}$$

ANSWER:



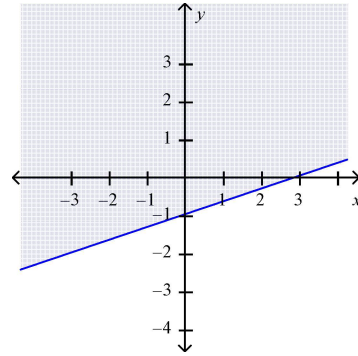
$$3y \geq x - 3$$

$$\frac{3y}{3} \geq \frac{x-3}{3}$$

$$y \geq \frac{1}{3}x - \frac{3}{3}$$

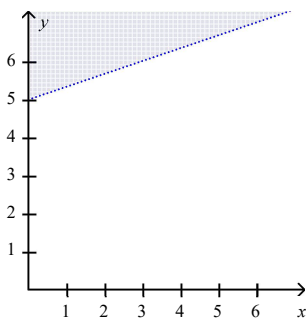
$$y \geq \frac{1}{3}x - 1$$

ANSWER:



15. $y > \frac{1}{3}x + 5$

ANSWER:



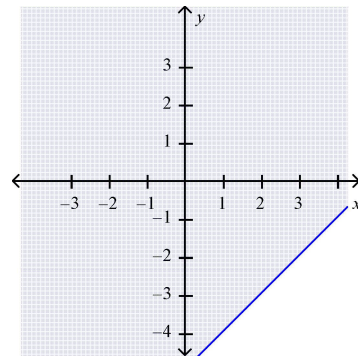
18. $x - 5 \leq y$

SOLUTION:

$$x - 5 \leq y$$

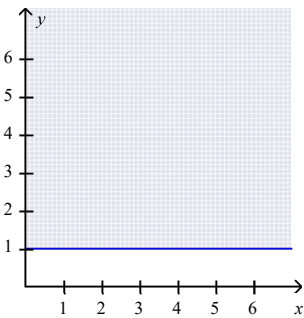
$$y \geq x - 5$$

ANSWER:



16. $y \geq 1$

ANSWER:



17. $3 \geq x - 3y$

SOLUTION:

$$3 \geq x - 3y$$

$$3 + 3y \geq x - 3y + 3y$$

$$3 + 3y \geq x$$

$$3 - 3 + 3y \geq x - 3$$

19. $y \geq -4x + 3$

ANSWER:

