Bell Work

1. What type of line (solid or dotted) do you use to graph $2x + 5y \geq 16$?
2. What type of line (solid or dotted) do you use to graph $2x + 5y > 16$?
3. Is (-8, 7) a solution for $2x + 5y \geq 16$?
4. What is the equation of the linear parent function?

$$y \le \frac{2}{3}x + 3 \quad \& \quad 4x + 3y > -12$$

Always shade the area with 2 marks.

Point: (0, 3) (0, 0)

True

Slope: $\frac{2}{3}$

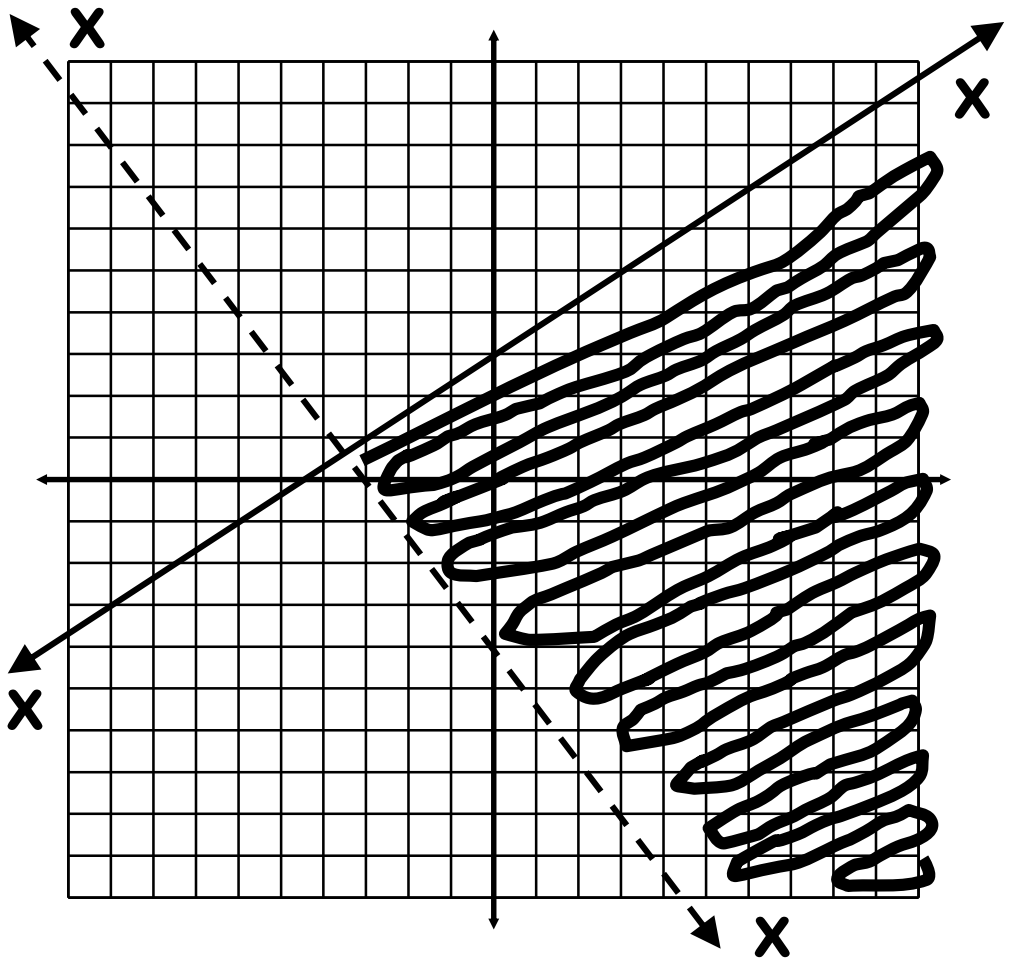
Make a mark on that side of the line at both ends of the line.

Point: (0, -4) (0, 0)

True

Point: (–3, 0)

Make a mark on that side of the line at both ends of the line.



Erase any part of the solid line that is not part of the answer.

$5x - 3y > -15$ & $3y > 6 - x$

$x + 3y > 6$

Point: (0, 5) (0, 0)

True

Make a mark on that side of the line at both ends of the line.

Point: (–3, 0)

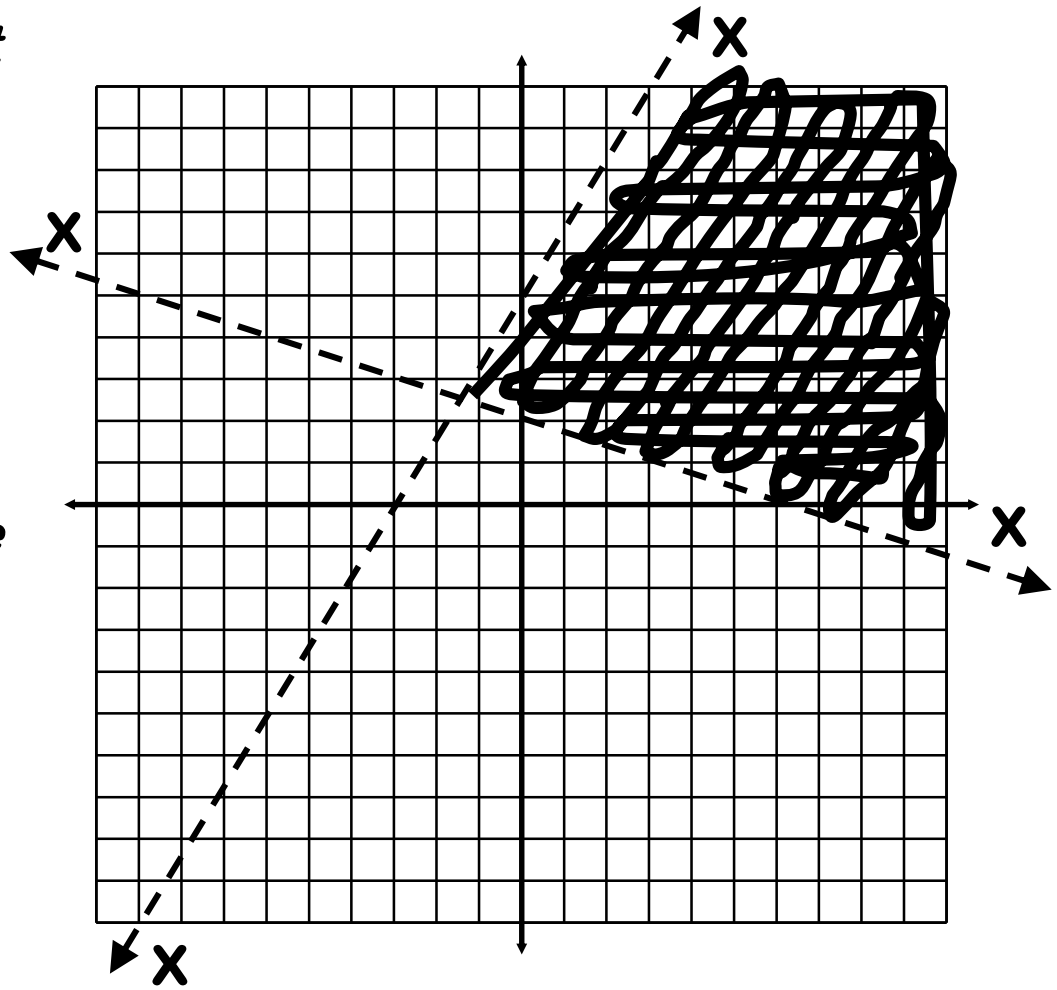
Point: (6, 0) (0, 0)

False

Make a mark on the other side of the line at both ends of the line.

Point: (0, 2)

Always shade the area with 2 marks.



$2x + 3y \geq 15$ & $4y > 3x + 8$

$y > \frac{3}{4}x + 2$

Point: (0, 5) (0, 0)

False

Make a mark on the other side of the line at both ends of the line.

Point: (7.5, 0)

Point: (0, 2) (0, 0)

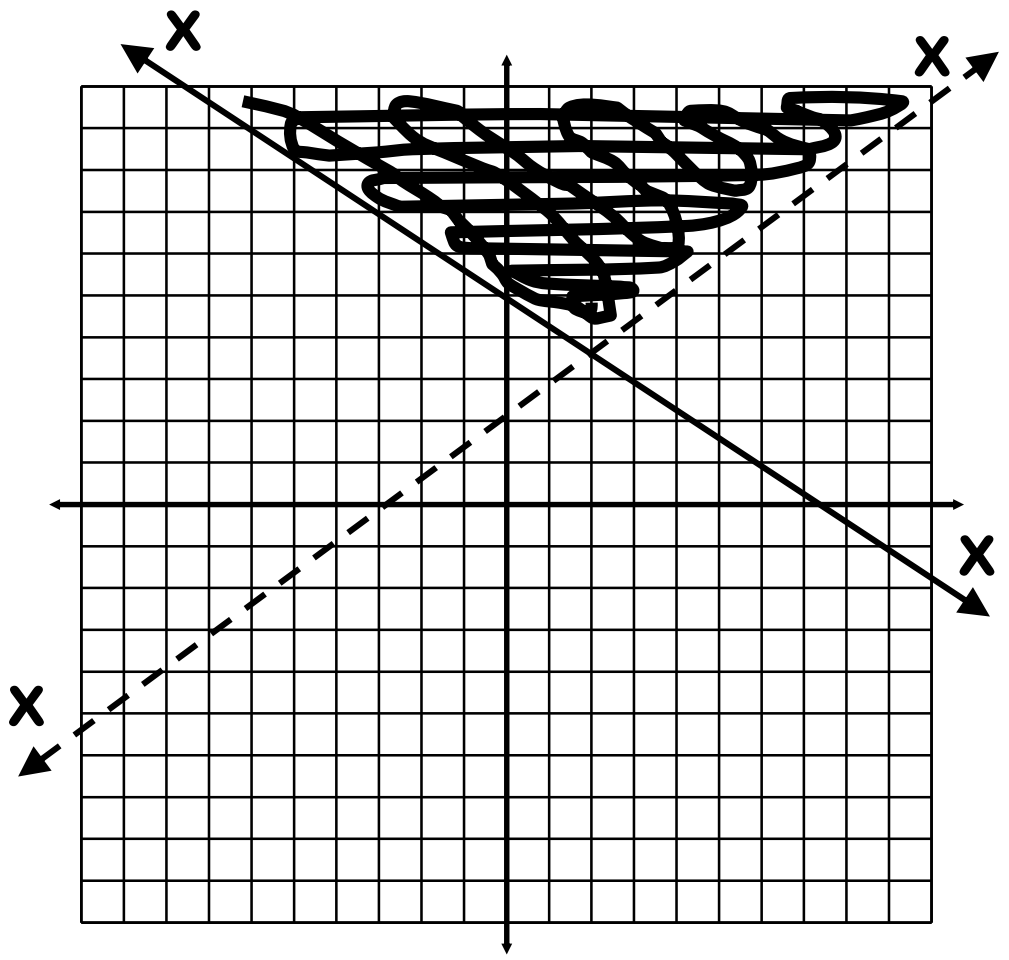
False

Make a mark on the other side of the line at both ends of the line.

Slope: $\frac{3}{4}$

Erase any part of the solid line that is not part of the answer.

Always shade the area with 2 marks.



$2x - 3y \leq 12$ & $x > -2$

Point: (0, -4) (0, 0)

True

Make a mark on that side of the line at both ends of the line.

Point: (6, 0)

Point: (-2, 0) (0, 0)

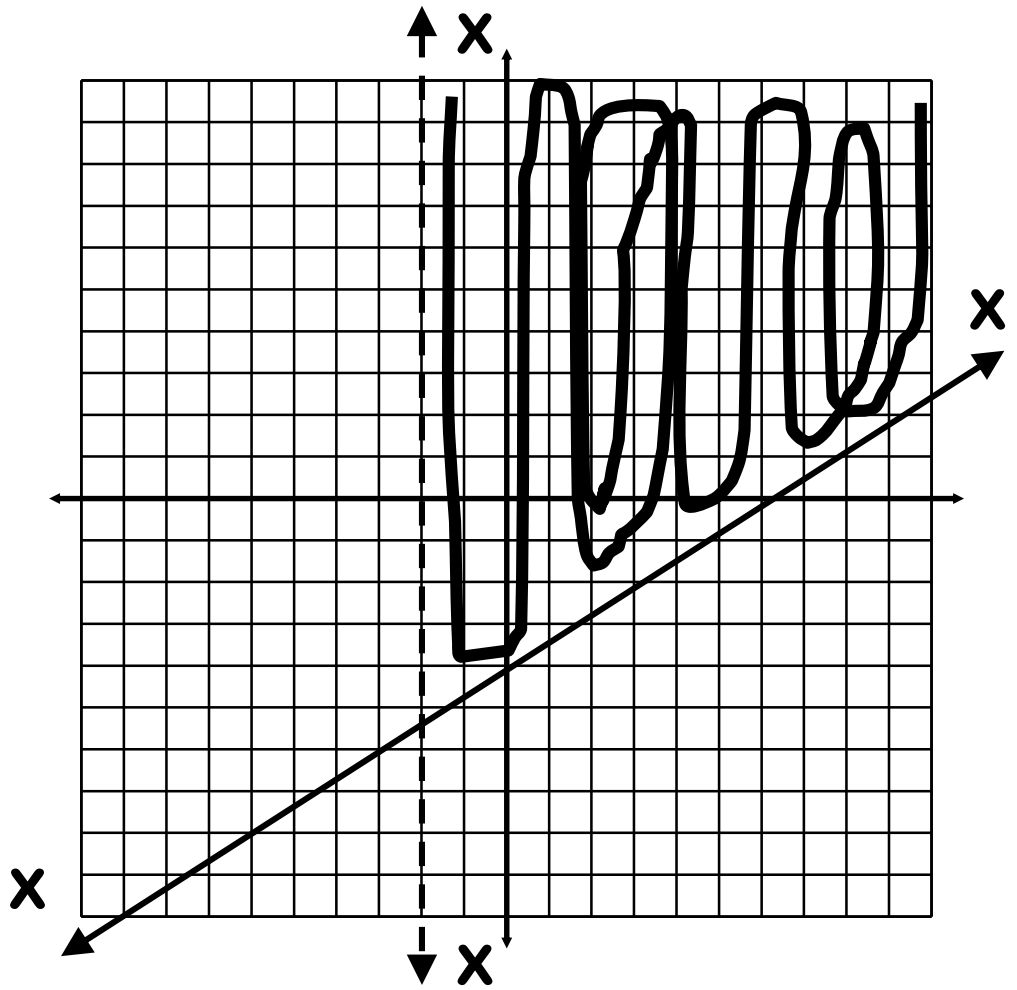
True

Make a mark on that side of the line at both ends of the line.

Vertical Line

Erase any part of the solid line that is not part of the answer.

Always shade the area with 2 marks.



Steps to Graphing Systems of Inequalities

1. Graph the first linear inequality.
2. Mark the true side at the arrows.
3. Graph the second linear inequality.
4. Mark the true side at the arrows.
5. Shade the area with 2 marks.
6. Erase any part of the solid line(s) that is not touching the shaded region.

Assignment:

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Graph each system of inequalities.

2. $\begin{cases} y \geq 4x - 4 \\ y \geq 3x - 3 \end{cases}$

3. $\begin{cases} x + y > 5 \\ x - y < -3 \end{cases}$

4. $\begin{cases} 7x < y - 16 \\ y \leq -5x - 2 \end{cases}$

5. $\begin{cases} 2x + 2y \leq 4 \\ 3x - y > 1 \end{cases}$

11. $\begin{cases} 5x - y > 0 \\ y < x \end{cases}$

12. $\begin{cases} 3y \geq 2x - 3 \\ y \geq 3x + 8 \end{cases}$

13. $\begin{cases} x + y > 5 \\ -2x + y \leq 2 \end{cases}$

14. $\begin{cases} y > 4 \\ x + 4y \geq 8 \end{cases}$