

Graphing Worksheet 33

1. Graph each of the following lines, all on the given set of axes. Either label each line or use different colors (with a key) to distinguish between the lines.

(a) $y = 2x - 5$

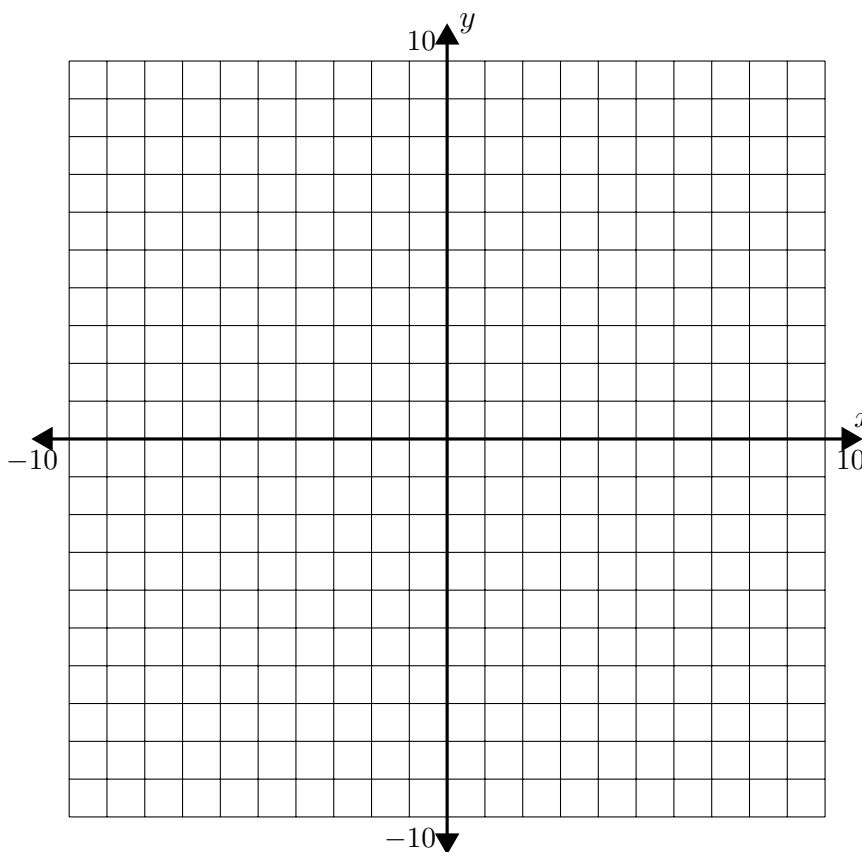
(b) $y = -\frac{1}{3}x + 6$

(c) $y = 2x + 6$

(d) $y = -\frac{1}{3}x - 5$

(e) $y = \frac{1}{2}x + 6$

(f) $y = \frac{1}{2}x - 5$

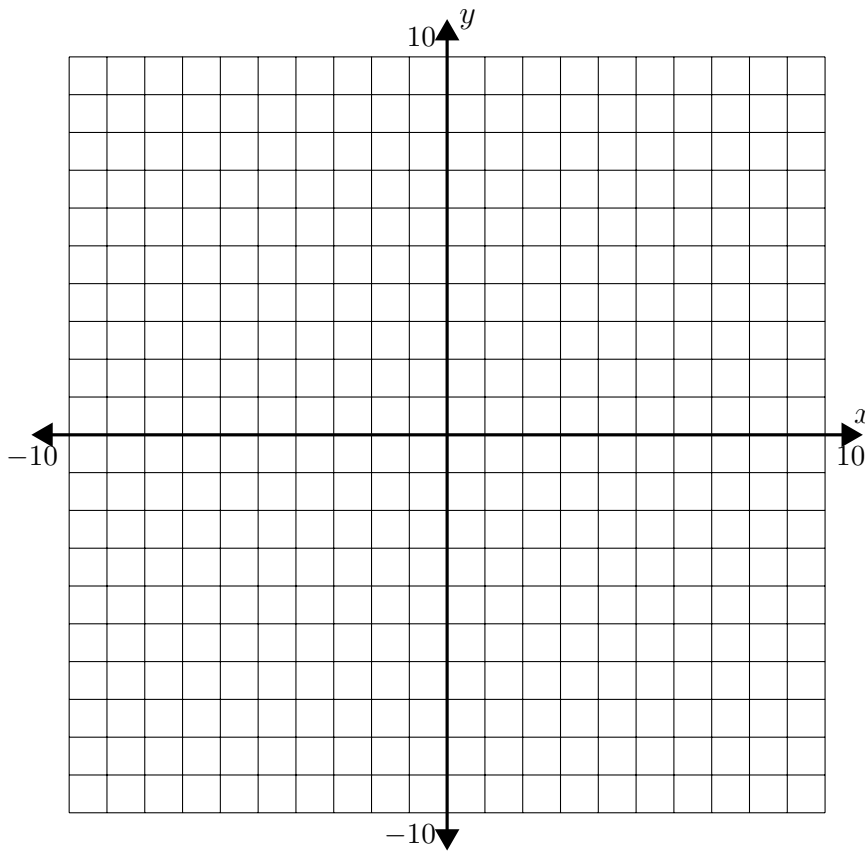


2. Which pairs of lines from exercise 1 are parallel? (That is, which pairs of lines go the same direction and never cross?) There are three pairs of answers to this question.

3. Look at the equations to your answer pairs to exercise 2. What do the equations have in common?

4. Complete this sentence: “When two lines are parallel, their _____ are _____.”

5. Graph $y = \frac{7}{2}x$ on the grid below. Label this as “Line 1”



6. Graph each of the following lines on the grid above. Either label each line or use different colors (with a key) to distinguish between the lines.

(a) $y = \frac{2}{7}x - 3$

(b) $y = -\frac{2}{7}x + 3$

(c) $y = \frac{7}{2}x - 5$

(d) $y = -\frac{7}{2}x + 5$

7. One of your lines from exercise 6 is perpendicular to Line 1. Which line is it? (Remember that “perpendicular” means that the two lines cross at angles of 90° .)

8. Write the slopes of Line 1 and the line perpendicular to it.

Slope of Line 1:

Slope of perpendicular line:

9. Describe the connection between the slopes of two perpendicular lines.

10. Which of the following equations have graphs that are perpendicular to the graph of $y = \frac{3}{2}x - 6$? (There are two answers.)

(a) $y = -\frac{3}{2}x - 6$

(b) $y = -\frac{2}{3}x + 6$

(c) $6x + 9y = 18$

(d) $9x - 6y = -18$