

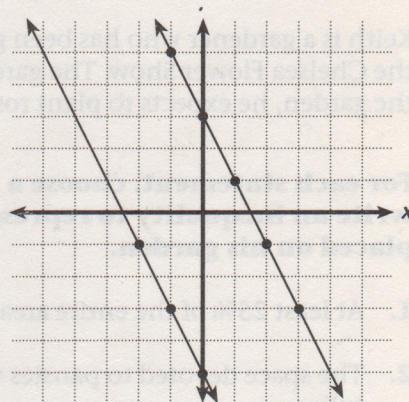


Lesson Activity

5.6 Exploring Parallel and Perpendicular Lines

The graph shows two parallel lines.

1. On the graph, label the line whose equation is $2x + y = 3$.
2. On the graph, write the equation of the other line in y -intercept form.



Use the grid provided to answer the questions.

3. Draw a line that passes through $(0, 5)$ and $(2, 2)$.
4. Write the equation of this line.

5. Draw a line perpendicular to the first that passes through $(0, -4)$.
6. Write the equation of this line. _____
7. Change $2x + 4y = 12$ into y -intercept form. _____
8. Write equations for two lines that are parallel to $2x + 4y = 12$.

9. Change $-12x + 6y = 30$ to y -intercept form. _____
10. Write equations for two lines that are perpendicular to $-12x + 6y = 30$.

Tell whether each statement is true or false and explain your reasoning.

11. A line with the equation $-3x + y = 4$ cannot be parallel to a line whose equation is $y = -3x + 4$.

12. The lines $y = \frac{2}{3}x + 2$ and $\frac{3}{2}x + y = 7$ are perpendicular.
