

Modeling Activity

(Use with Lesson 6-6)

Slope of Perpendicular Lines

Materials: rectangular piece of paper (sheet of paper 8 1/2" x 11")

There is a special relationship between the slopes of perpendicular lines.

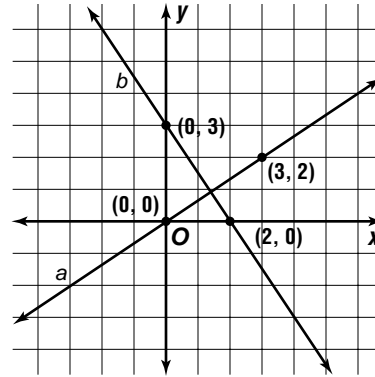
Activity: Determine if the lines are perpendicular. If so, find the slope of each line.

► Use the corner of a piece of paper to determine that the lines are perpendicular.

► Find the slope of each line.

$$\text{Line } a \quad m = \frac{2 - 0}{3 - 0} = \frac{2}{3}$$

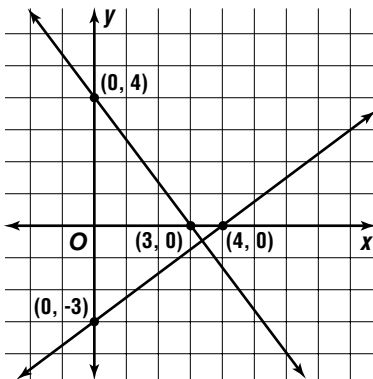
$$\text{Line } b \quad m = \frac{3 - 0}{0 - 2} = -\frac{3}{2}$$



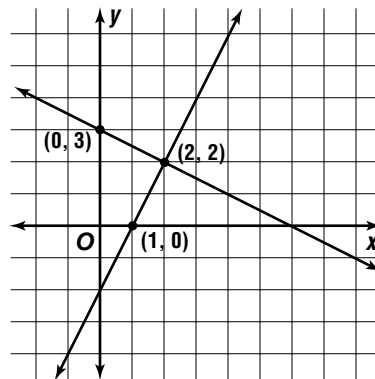
INVESTIGATE

Determine if the pairs of lines are perpendicular. If so, find the slopes of the lines.

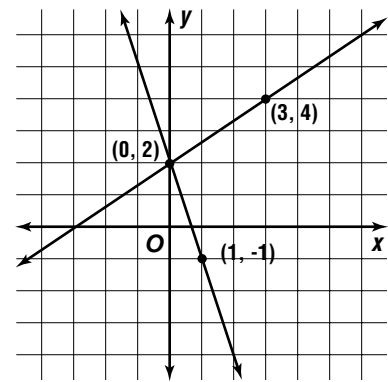
1.



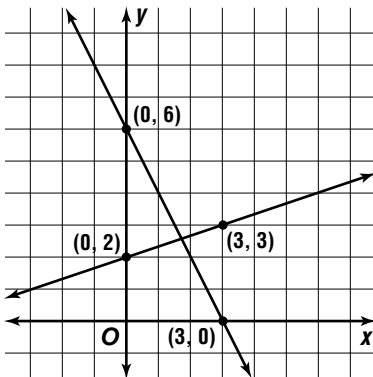
2.



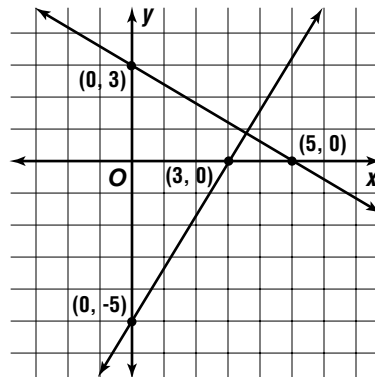
3.



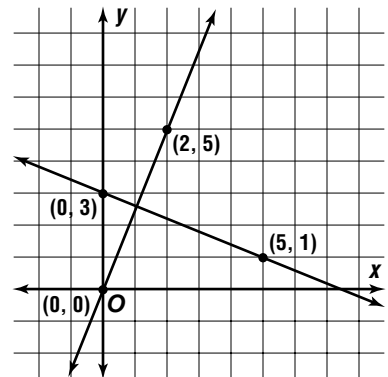
4.



5.



6.



WRITE

7. Describe the relationship between the slopes of perpendicular lines.