

**6.10 Do Now re-Quiz: Perpendicular and parallel slopes, the distance formula**

1. Write down the slope perpendicular to the given slope.

(a)  $m = \frac{4}{3}$        $m_{\perp} =$

(c)  $m = -0.5$        $m_{\perp} =$

(b)  $m = -3$        $m_{\perp} =$

(d)  $m = \frac{4}{7}$        $m_{\perp} =$

2. The line  $l$  has the equation  $y = -\frac{1}{3}x + 4$ .

(a) What is the slope of the line  $k$ , given  $k \parallel l$ ?

(b) What is the slope of the line  $j$ , given  $j \perp l$ ?

3. What is the slope of a line parallel to the line  $x - 3y = 9$ ?

4. What is the slope of a line perpendicular to the line  $-2x + 4y = 12$ ?

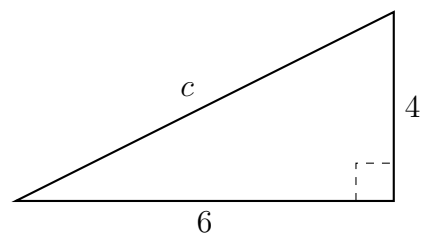
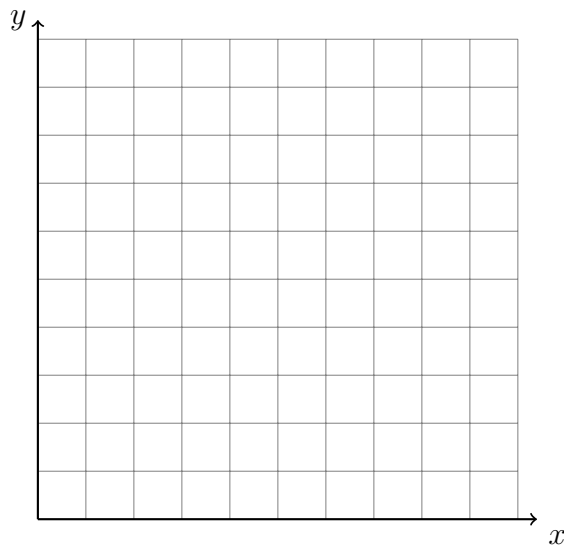
Note: The formula for distance is  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

5. Graph and label  $\triangle ABC$  and find the lengths of its sides.  $A(2, 1)$ ,  $B(8, 9)$ ,  $C(8, 1)$ .

(a)  $AC =$

(b)  $BC =$

(c)  $AB =$



6. Find  $c$ .

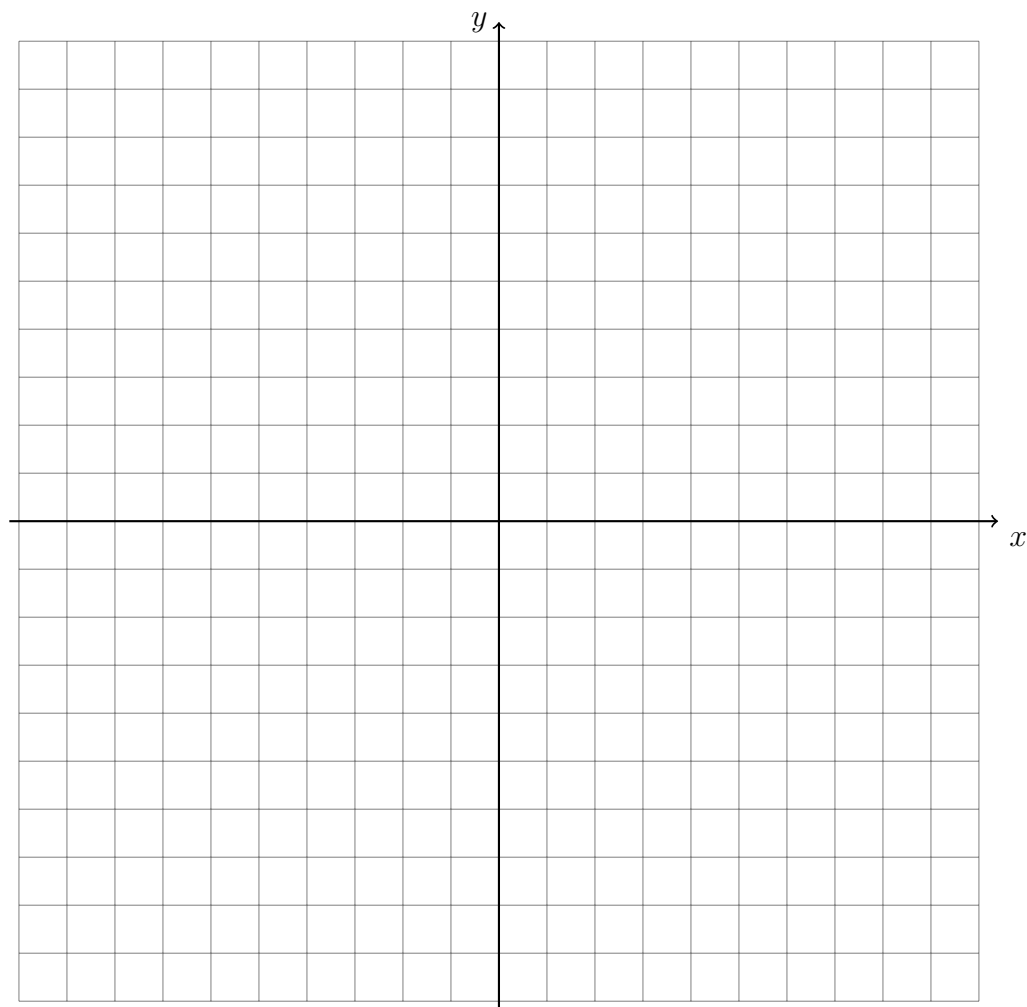
7. What is the length of  $\overline{CD}$  if  $C(2, 1)$  and  $D(-3, -11)$ ?

8. Graph and label the two equations. Mark their intersection as an ordered pair.

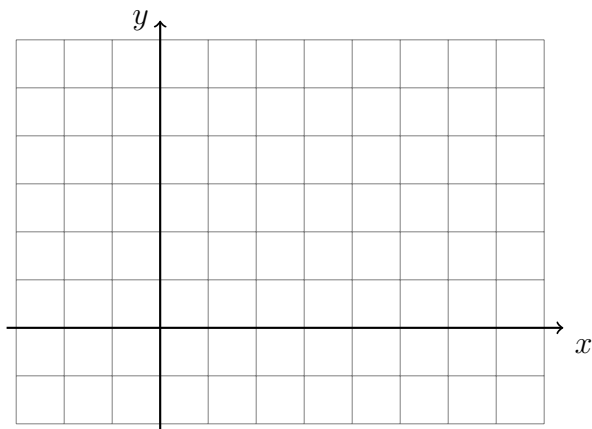
$$y = x + 7$$

$$4x + 5y = -10$$

Are the lines parallel, perpendicular, or neither? Justify your answer.



9. On the graph below, draw  $\overline{AB}$ , with  $A(-2, 3)$  and  $B(5, 1)$ , labeling the end points. Determine and state the coordinates of the midpoint  $M$  of  $\overline{AB}$  and mark and label it on the graph.



10. Spicy: On the set of axes below, graph the quadrilateral  $ABCD$  having coordinates  $A(-3, -3)$ ,  $B(5, 1)$ ,  $C(6, 8)$ , and  $D(-2, 4)$ . Find the slope of each of the four sides. What type of quadrilateral is  $ABCD$ ? Justify your answer.

