

Name:

### 6.6 Do Now: Distance formula, perpendicular and parallel slopes

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

(a)  $m = -\frac{3}{5}$        $m_{\perp} =$       (b)  $m = 0.75$        $m_{\perp} =$

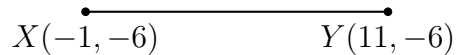
2. The line  $l$  has the equation  $y = -\frac{1}{2}x + 3$ .

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

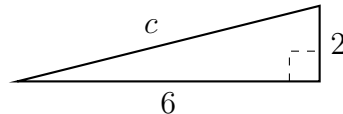
(b) What is the slope of the line  $j$ , given  $j \perp l$ ?

3. What is the slope of a line parallel to the line  $x - 2y = 1$ ?

4. Find  $XY$ ,  $X(-1, -6)$  and  $Y(11, -6)$ .



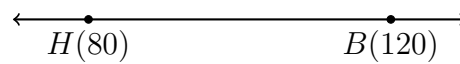
5. Find  $c$ .



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

Use  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

7. What is the midpoint of  $\overline{HB}$ ,  $H(80)$  and  $B(120)$ ?



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

$$y = \frac{3}{2}x - 9$$

$$2x + 3y = 12$$

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

