

Name:

**6.5 PreQuiz: Slope-intercept form of linear equations**

**8.F.A.3**

1. Find the equation of the given line  $\overleftrightarrow{AB}$ ,  $A(0, 2)$ ,  $B(3, 5)$ .

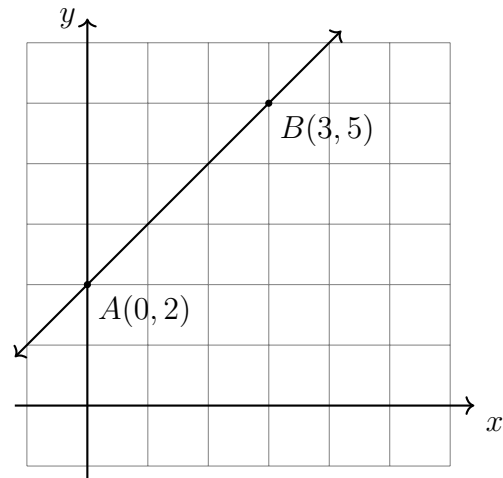
(a) Find the slope.

$$m =$$

(b) Write down the  $y$ -intercept.

$$b =$$

(c) Write the equation of the line.



2. Is the point  $(4, 7)$  on the line  $y = 3x - 5$ ? Support your answer algebraically.

3. Answer each statement about linear equations.

(a) What is the slope of a horizontal line?

(b) What is the  $y$ -intercept of the line  $y = 2x + 3$ ?

(c) What is the slope of the line  $y = x - 5$ ?

(d) Which has an undefined slope, a vertical or horizontal line?

(e) What is the  $y$ -intercept of the line  $y = -2x$ ?

4. A line has a slope of  $-\frac{3}{2}$  and passes through the point  $(0, 2)$ . Write down the equation of the line in the form  $y = mx + b$ .

**HSG.GPE.B.5 The slope criteria for parallel and perpendicular lines**

5. The line  $j$  has the equation  $y = 2x - 3$ .
- (a) What is the slope of the line  $k$ , given  $k \parallel j$ ?
- (b) What is the slope of the line  $l$ , given  $l \perp j$ ?
6. The line  $l$  has the equation  $y = -\frac{3}{5}x + 4$ . To each line below, circle whether  $l$  is parallel, perpendicular, or neither.
- (a) parallel    perpendicular    neither     $y = \frac{3}{5}x - 2$
- (b) parallel    perpendicular    neither     $y = \frac{5}{3}x + 9$
- (c) parallel    perpendicular    neither     $y = -\frac{3}{5}x + 1$
- (d) parallel    perpendicular    neither     $y = -\frac{5}{3}x - 7$
7. Write the linear equation  $6x + 2y = 4$  in the form  $y = mx + c$ .
8. The line has the equation  $y = -4x + 11$ .
- (a) Write down its slope and  $y$ -intercept.     $m =$      $b =$
- (b) Is the point  $(3, 1)$  on the line? Justify your answer.