6.5 PreQuiz: Slope-intercept form of linear equations

1. Find the equation of the given line $\overleftrightarrow{AB}$, $A(0,4)$, $B(4,2)$.

   (a) Find the slope.

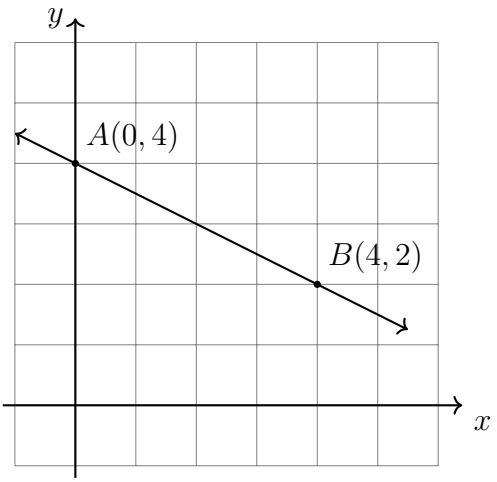
   $m =$

   (b) Write down the y-intercept.

   $b =$

   (c) Write the equation of the line in the slope-intercept form

   $y = mx + b$



2. Complete each statement about linear equations.

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

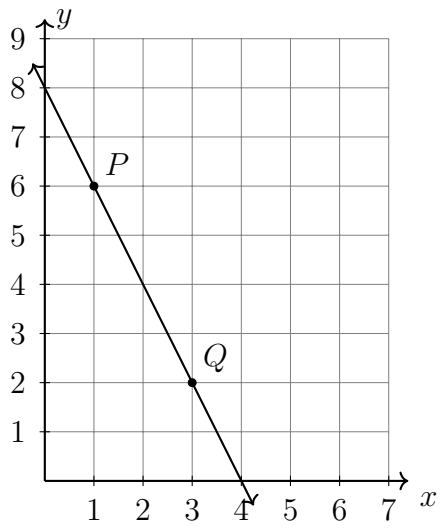
   (b) What is the y-intercept of the line $y = 2x + 3$?

   (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 $y = -2x$?

3. Given $\overleftrightarrow{PQ}$, $P(1,6)$, $Q(3,2)$. Find its slope, y-intercept, and equation.



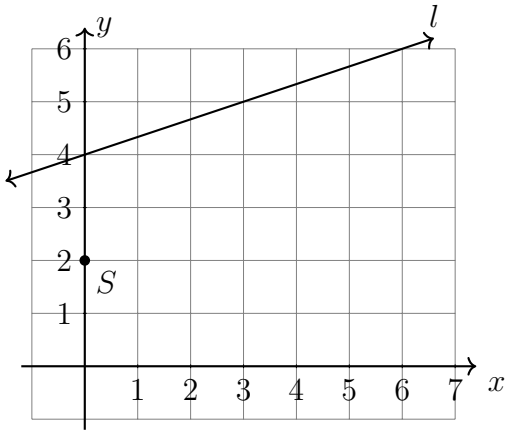
4. The line l is shown on the grid below.

   (a) Write down it's slope, y-intercept.
   $m =$ $b =$

   (b) Write down the equation of line l.

   (c) Draw a line parallel to line l though point S.

   (d) Write down the equation of the second line.



5. The line has the equation $y = -x + 7$.

   (a) Write down it's slope and y-intercept. $m =$ $b =$

   (b) Is the point $(4,4)$ on the line? Justify your answer.

6. The line j has the equation $y = 3x + 2$.

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

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

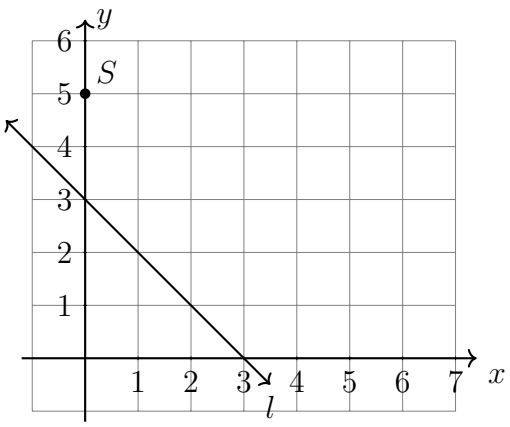
7. The line l is shown on the grid below.

   (a) Write down it's slope, y-intercept.
   $m =$ $b =$

   (b) Write down the equation of line l.

   (c) Draw a line parallel to line l though point S.

   (d) Write down the equation of the second line.



8. 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 $3x - 5y = -15$

   (d) parallel perpendicular neither $5x - 3y = 6$