Unit 6: Analytic geometry Name:
16 December 2022

6.6 Quiz: Slope-intercept form of linear equations **8.F.A.3**

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

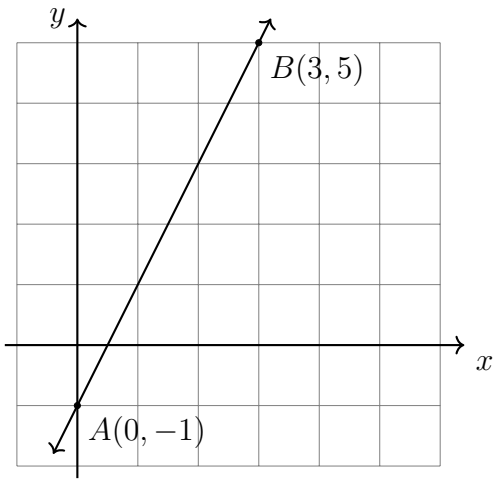
   (a) Find the slope.

   $m =$

   (b) Write down the y-intercept.

   $b =$

   (c) Write the equation of the line.



2. Is the point $(3, 10)$ on the line $y = 2x + 4$? Support your answer algebraically.

3. Answer each statement about linear equations.

   (a) What is the y-intercept of the line $y = -5x + 5$?

   (b) What is the slope of a vertical line?

   (c) What is the y-intercept of the line $y = -2x - 1$?

   (d) What is the slope of the line $y = -x + 7$?

   (e) Which has a zero slope, a vertical or horizontal line?

4. A line has a slope of $-\frac{2}{3}$ and passes through the point $(0, 5)$. 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 $y = 4x - 1$.
   (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 $y = \frac{3}{2}x + 4$. To each line below, circle whether l is parallel, perpendicular, or neither.
   (a) parallel perpendicular neither $y = \frac{3}{2}x - 4$

   (b) parallel perpendicular neither $y = \frac{2}{3}x + 5$

   (c) parallel perpendicular neither $y = -\frac{3}{2}x + 13$

   (d) parallel perpendicular neither $y = -\frac{2}{3}x + 1$

7. Write the linear equation $2x - 3y = -12$ in the form $y = mx + c$.

8. The line has the equation $y = \frac{4}{5}x + 10$.
   (a) Write down it's slope and y-intercept. $m =$ $b =$
   (b) Is the point $(-5, 6)$ on the line? Justify your answer.