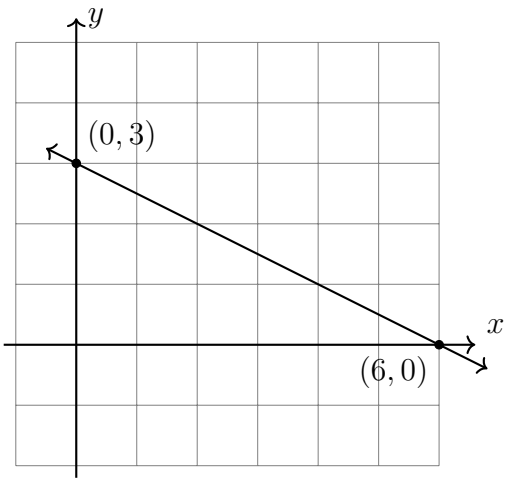
**8.5 Classwork: Analytic geometry** **8.F.A.3**

1. A line is plotted in the graph below.




   (a) Write down the $y$-intercept of the line.

   (b) What is the slope of the line?

   (c) What is the $x$-intercept of the line?

   (d) Write down its equation in slope-intercept form.

2. Find the slope of the line through the points $(-1, 4)$ and $(1, 6)$.

3. A line has a slope of $\frac{3}{5}$ and passes through the point $(10, 7)$.

   (a) Write the equation of the line in the form $(y - y_1) = m(x - x_1)$.

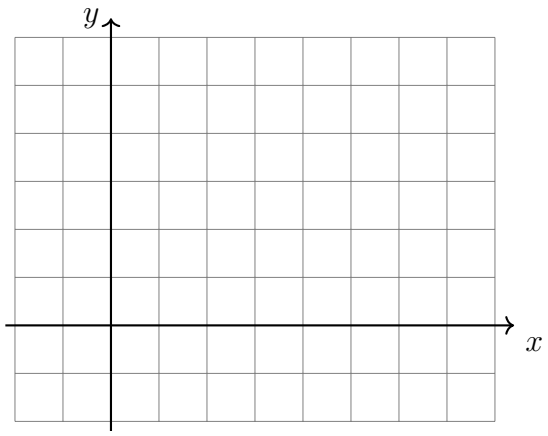
   (b) Rewrite the equation of the line in the form $y = mx + b$.

**Systems of equations** **HSG.REI.C.6**

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

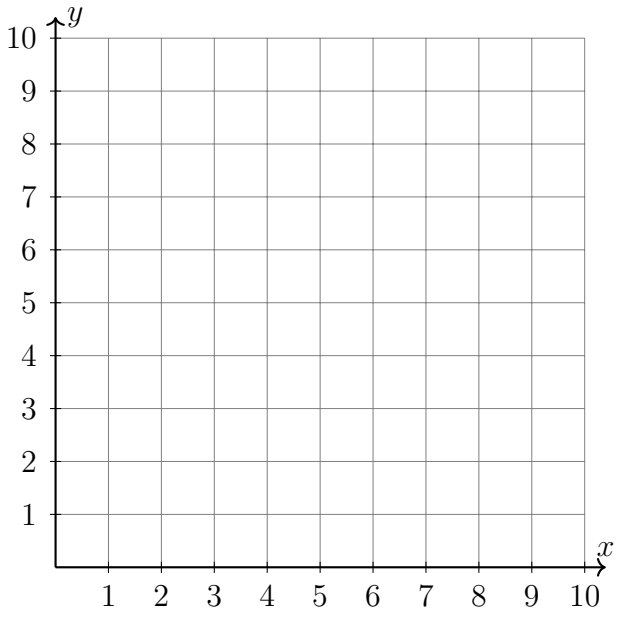
   $f(x) = -\frac{1}{2}x + 4$

   $g(x) = \frac{1}{3}x - 1$




5. Dr. Huson buys six pizza pies for the Pi Day party, some plain, some special with all the toppings. Plain pizzas cost \$10 and "everything" pizzas \$15. The total cost was \$75. How many of each pizza did he buy?

   Let $x$ be the number of plain pizzas and $y$ be the number of pizzas with everything.




   (a) Write an equation and graph a line to represent a total of six pizzas.

   (b) Make a second equation and line representing the \$75 total cost.

   (c) Mark the intersection as an ordered pair and state the number of each type of pizza.