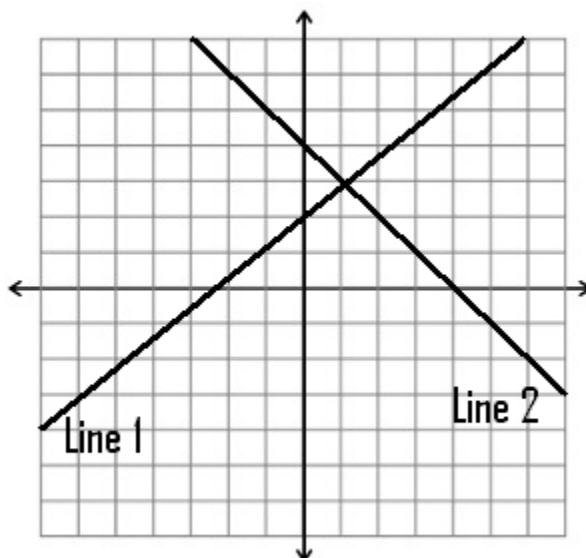


## Linear Equations Quiz **Answer Key**

1. What is the equation for the slope of a line?

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

2. Identify the slope and y-intercept of Line 2, below.



Line 2:  $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 0}{0 - 4} = \frac{4}{-4} = -1$        $y = mx + b \rightarrow 4 = 6/7 * 0 + b$        $b = 4$

3. Without solving, what do you think slope of Line 1 is? Explain your logic.

**1, because Line 1 and Line 2 are perpendicular lines, the product of their slopes should equal -1.**

4. If you were in the middle of an ice rink that has “perfect ice” (no friction), how would you get off the ice rink? Explain your logic.

- **Blow in the opposite direction.**
- **Throw an object in the opposite direction.**
- **Wave your hands to produce wind in the opposite direction.**

**These actions work because the floor has no friction so the only way to move is through reaction forces / propulsion.**