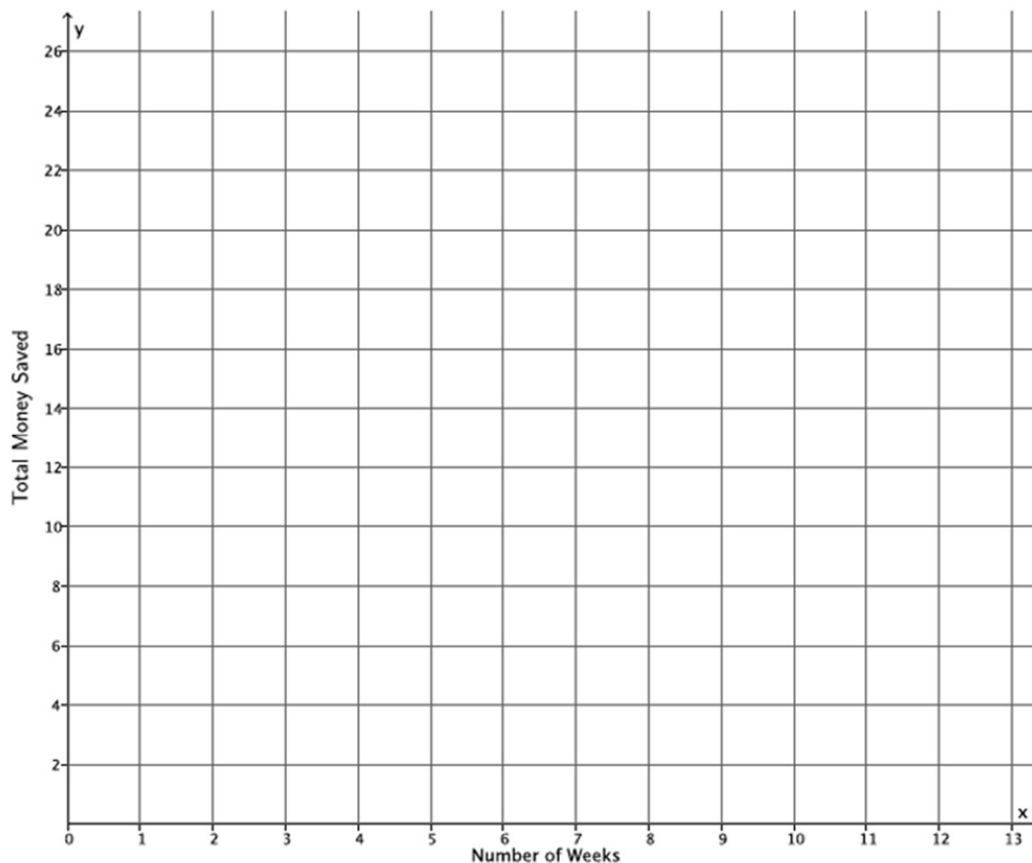# Slope from Equation

1. A bank put $10 into a savings account when you opened the account. Eight weeks later, you have a total of $24. Assume you saved the same amount every week.

a) If y is the total amount of money in the savings account and x represents the number of weeks, write an equation in the form $y = mx + b$ that describes the situation.

b) Identify the slope and the y-intercept point. What do these numbers represent?

c) Graph the equation on a coordinate plane.

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a) If y is the total amount of money in the savings account and x represents the number of weeks, write an equation in the form $y = mx + b$ that describes the situation.

$$24 = m(8) + 10$$
$$14 = 8m$$
$$\frac{14}{8} = m$$
$$\frac{7}{4} = m$$
$$y = \frac{7}{4}x + 10$$

b) Identify the slope and the y-intercept point. What do these numbers represent?

The slope is $\frac{7}{4}$, and the y-intercept point is $(0, 10)$. The y-intercept point represents the amount of money the bank gave me, in the amount of \$10.

The slope represents the amount of money I save each week, $\frac{7}{4} = \$1.75$.

c) Graph the equation on a coordinate plane.

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