You're the One that I Want $100 Question

Solve for y.

y + x = 1

You're the One that I Want $100 Answer

$$y = 1 - x$$

You're the One that I Want $200 Question

Solve for y.

9x + y = -3

You're the One that I Want $200 Answer

y = -3 – 9x

You're the One that I Want $300 Question

Solve for y.

2y + x = 4

You're the One that I Want $300 Answer

2y + x = 4

2y = 4 – x

$$y = \frac{4-x}{2}$$

You're the One that I Want $400 Question

Solve for y.

-3x – 6y = 8

You're the One that I Want $400 Answer

-3x – 6y = 8

-6y = 8 + 3x

$$\frac{8+3x}{-6} = y$$

You're the One that I Want $500 Question

Solve for y.

$$\mathbf{2y = 3x + 1 - 3y}$$

You're the One that I Want $500 Answer

$$2y = 3x + 1 - 3y$$

2y + 3y = 3x + 1

5y = 3x + 1

$$\boldsymbol{y = \frac{3x + 1}{5}}$$

Paths Cross $100 Question

Describe the process involved in solving for the **y-intercept** of an equation.

Paths Cross $100 Answer

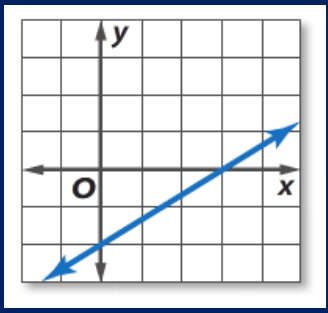
Plug in a **zero** for the **x variable.**

Then, solve for **y**.

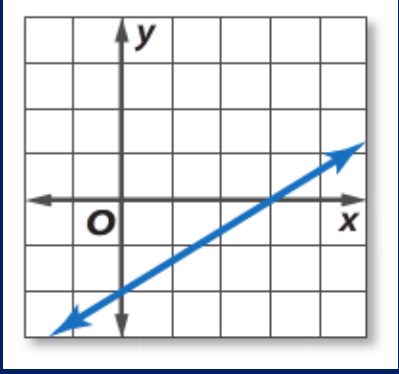
Lastly, create a coordinate with your solution in the y position and zero in the x position.

Paths Cross $200 Question

Find the intercepts of the following graph.



Paths Cross $200 Answer



(0, -2), (3, 0)

JEOPARDY!

Paths Cross $300 Question

Find the **x-intercept** of the following equation:

$$y = -x + 2$$

Paths Cross $300 Answer

$$y = -x + 2$$
$$(0) = -x + 2$$
$$-2 = -x$$
$$2 = x$$

(2, 0)

Paths Cross $400 Question

Find the **y-intercept** of the following equation:

$2x - 3y = 6$

Paths Cross $400 Answer

$2x - 3y = 6$

$2(0) - 3y = 6$

$-3y = 6$

$y = -2$

(0, -2)

Paths Cross $500 Question

Find the **x- <u>and</u> y-intercept** of the following equation:

$5x + 2y = 10$

Paths Cross $500 Answer

<u>x-intercept</u>:

$5x + 2y = 10$

$5x + 2(0) = 10$

$5x = 10$

$x = 2$

(2, 0)

<u>y-intercept</u>:

$5x + 2y = 10$

$5(0) + 2y = 10$

$2y = 10$

$Y = 5$

(0, 5)

Things Change $100 Question

Describe how to find the **slope** of a linear equation from its graph.

Things Change $100 Answer

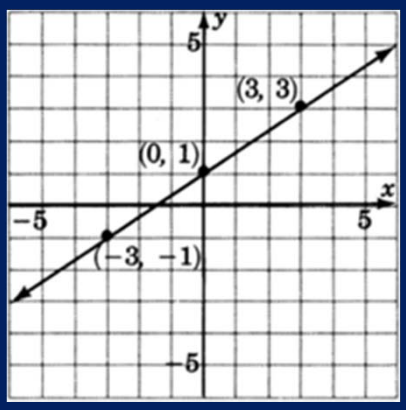
Count the vertical change and the horizontal change in order to calculate **rise over run**

OR

select two points on the line and use the **slope formula** to find a solution.

Things Change $200 Question

Find the slope of the following equation:



Things Change $200 Answer

$$\frac{rise}{run} = \frac{2}{3}$$

Things Change $300 Question

Find the slope of the line that passes through the pair of points:

x	y
6	-2
3	4

Things Change $300 Answer

$$\frac{4 - -2}{3 - 6} = \frac{6}{-3} = \mathbf{-2}$$

Things Change $400 Question

Calculate the slope of the line that passes through the following coordinates:

$$\left(\frac{1}{3}, \frac{3}{4}\right), \left(\frac{2}{3}, \frac{1}{4}\right)$$

Things Change $400 Answer

$$\frac{2/4}{-1/3} = \frac{2}{4} \cdot \frac{3}{-1} = \frac{6}{-4} = -\frac{\mathbf{3}}{\mathbf{2}}$$

Things Change $500 Question

Find the slope of the line that passes through (-2, -4) and (-2, 3).

Things Change $500 Answer

$$\frac{3--4}{-2--2} = \frac{7}{0} = \textbf{undefined}$$

In the Real World $100 Question

Brandon owns a lawn care business. He charges a flat fee of $30 for his services, with an additional $5 per hour he spends working on the property. The amount of money he makes per property, y, can be represented by the equation **y = 5x + 30**, where x is the number of hours he works.

Find the **y-intercept** for this equation.

In the Real World $100 Answer

Y = 5x + 30

Y = 5(0) + 30

Y = 0 + 30

Y = 30

(0, 30)

In the Real World $200 Question

For her birthday Kwan receives a $50 gift card to download songs. The function y = -0.50x + 50 represents the amount of money, y, that remains on the card after a number of songs, x, are downloaded.

Find the **x-intercept**.

In the Real World $200 Answer

y = -0.50x + 50

(0) = -0.50x + 50

-50 = -0.50x

x = 100

(100, 0)

In the Real World $300 Question

A ramp used for cows to walk up into an elevated barn rises 3 feet for every 51 feet it goes across. What is the **slope** of this ramp?

In the Real World $300 Answer

$$\frac{rise}{run} = \frac{3}{51} = \frac{1}{17}$$

In the Real World $400 Question

Kevin's savings account balance changed from $1140 in January (the FIRST month) to $1450 in April (the FOURTH month).

Find the average rate of change per month. Round your answer to the nearest dollar.

In the Real World $400 Answer

$$\frac{1450 - 1140}{4 - 1} = \frac{310}{3} = 103.33$$

$103.33 increase per month

In the Real World $500 Question

The equation **5x + 12y = 240** describes the total amount of money collected when selling x paperback books at $5 per book and y hardback books at $12 per book.

Find the **y-intercept** of this equation.

In the Real World $500 Answer

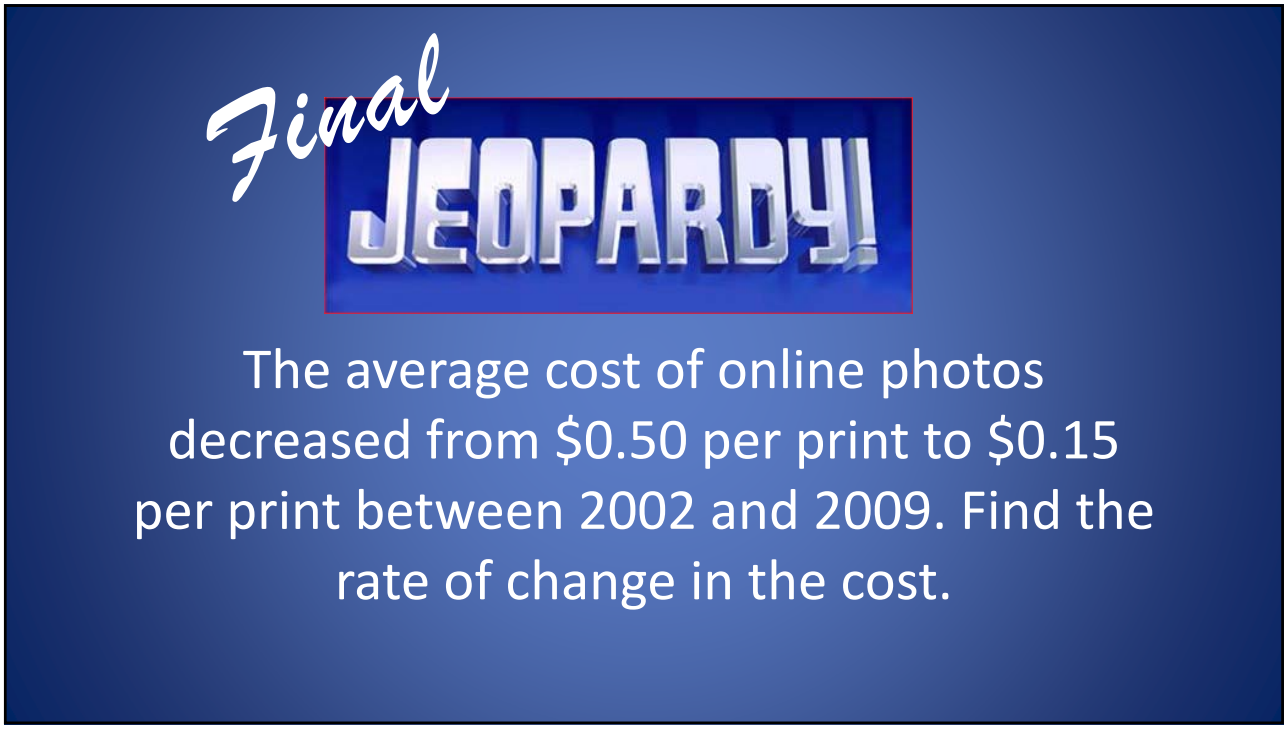
5x + 12y = 240

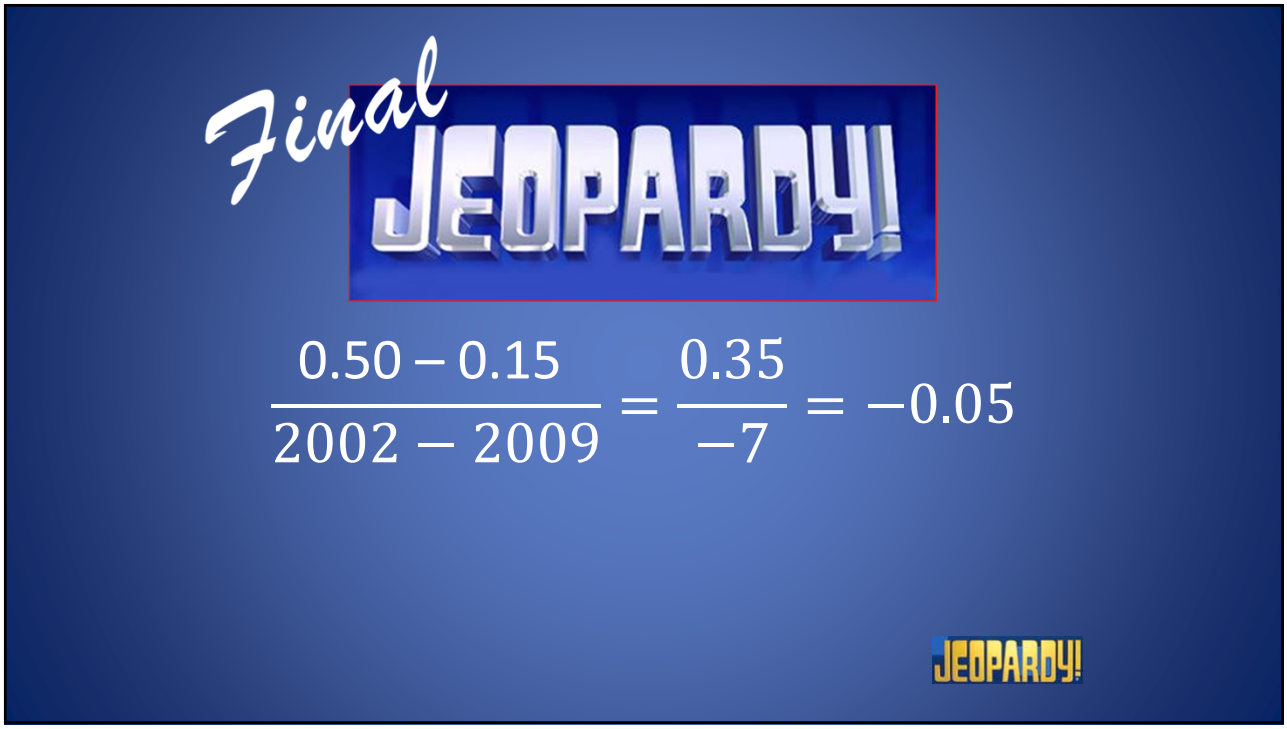
5(0) + 12y = 240

12y = 240

y = 20

(0, 20)


Final
JEOPARDY!
The average cost of online photos decreased from $0.50 per print to $0.15 per print between 2002 and 2009. Find the rate of change in the cost.


Final
JEOPARDY!
$\frac{0.50-0.15}{2002-2009}=\frac{0.35}{-7}=-0.05$
JEOPARDY!