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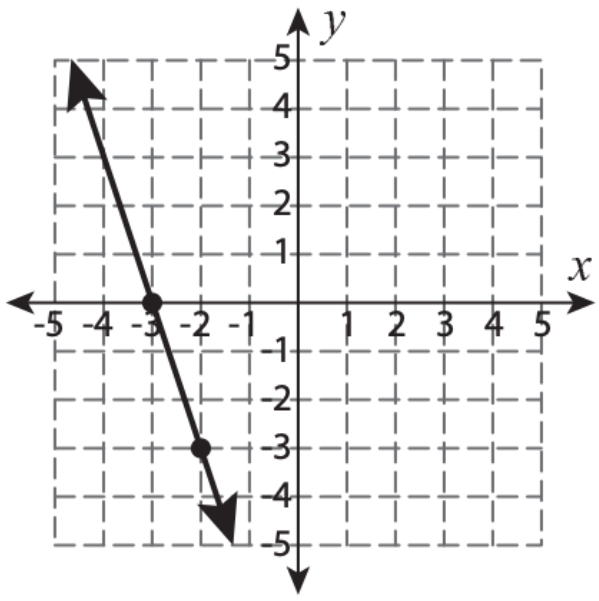
at Success Academy

Middle School Math Workshop: Student Work Packet
Lesson 3: Linear Regression

Do Now:



Write an equation from the graph above. What is the value of “y” when “x” is 2?

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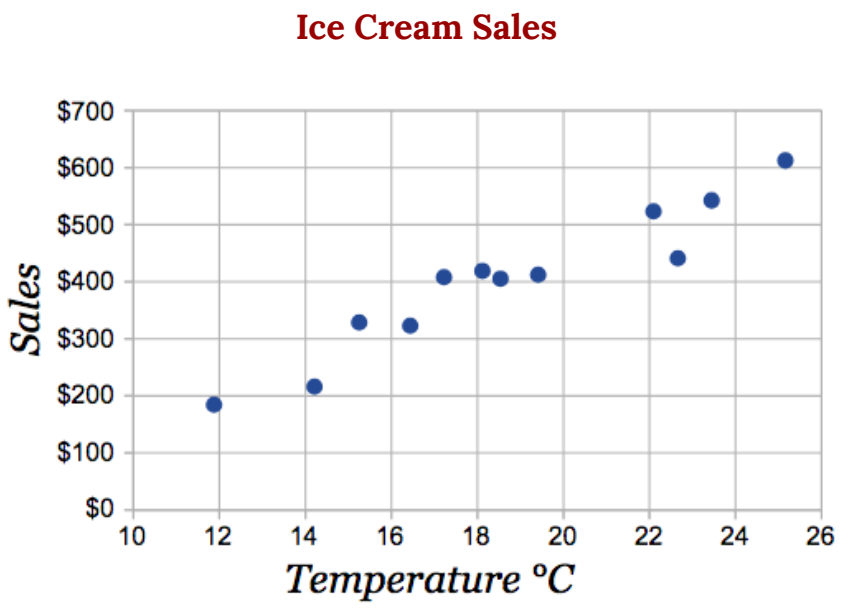
Explore



Ice Cream Sales vs Temperature	
Temperature °C	**Ice Cream Sales**
14.2°	$215
16.4°	$325
11.9°	$185
15.2°	$332
18.5°	$406
22.1°	$522
19.4°	$412
25.1°	$614

What does the graph above show us? What can you infer from this data?

We will use our graphing calculator to generate a linear regression equation. Round all values to the nearest **thousandth** place.

★ ***Linear Regression Equation:*** _____

★ Based on our equation, predict the amount of ice cream sales when the temperature is 20 degrees Celsius. Round to the nearest whole number.

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Practice

The data table below shows water temperatures at various depths in an ocean.

Water Depth (*x*) (meters)	**Temperature (*y*)** (°C)
50	18
75	15
100	12
150	7
200	1

Part A: Write a linear regression equation that approximates the temperature. Round all values to the nearest ***thousandth***.

***Linear Regression Equation*: _____**

Part B: Using this equation, predict the temperature (°C), to the nearest integer, at a water depth of 255 meters.