



Math Virtual Learning

Grade 8

Scatter Plots: Relationships

April 28, 2020



Math 8

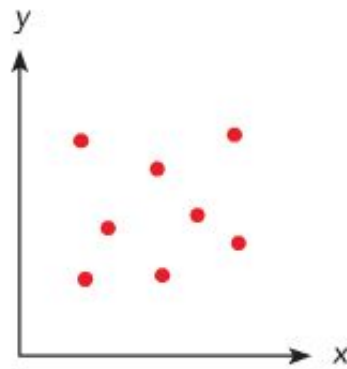
Lesson: April 28, 2020

Objective/Learning Target:

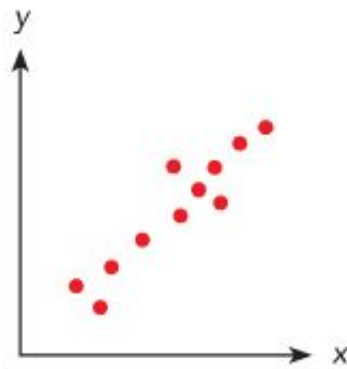
I can use a trend line to model the relationship between two variables in a scatter plot.

Warm Up:

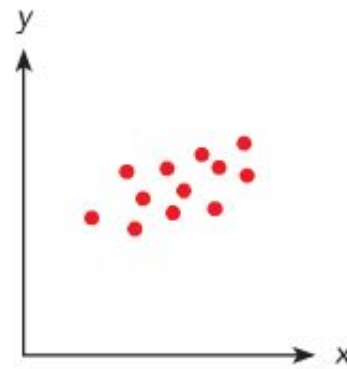
Describe each of the following graphs in terms of its association (strong, weak, none) and then its correlation (positive, negative).



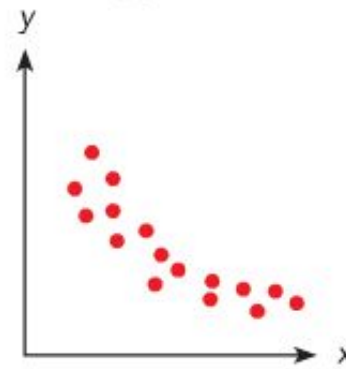
Graph A



Graph B



Graph C



Graph D

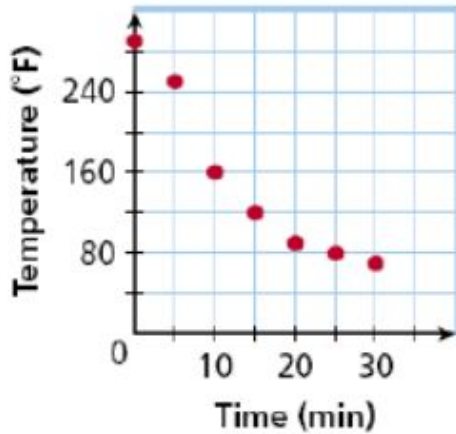
Solution: A: No Association, B: Strong Association & Positive Correlation, C: Strong Association & Positive Correlation, D: Strong Association & Negative Correlation

Try This:

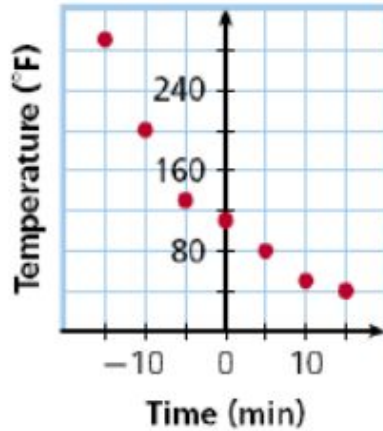
Answer Key provided

Choose the scatter plot that best represents the relationship between the number of minutes since a pie has been taken out of the oven and the temperature of the pie.

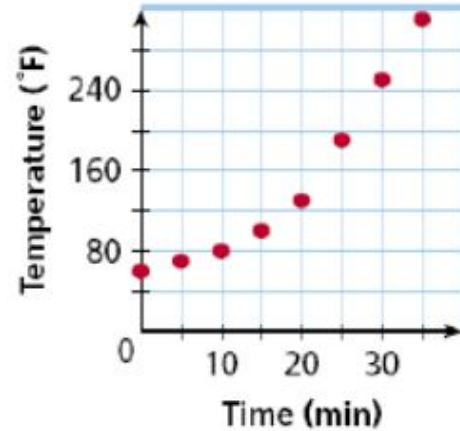
Graph A



Graph B



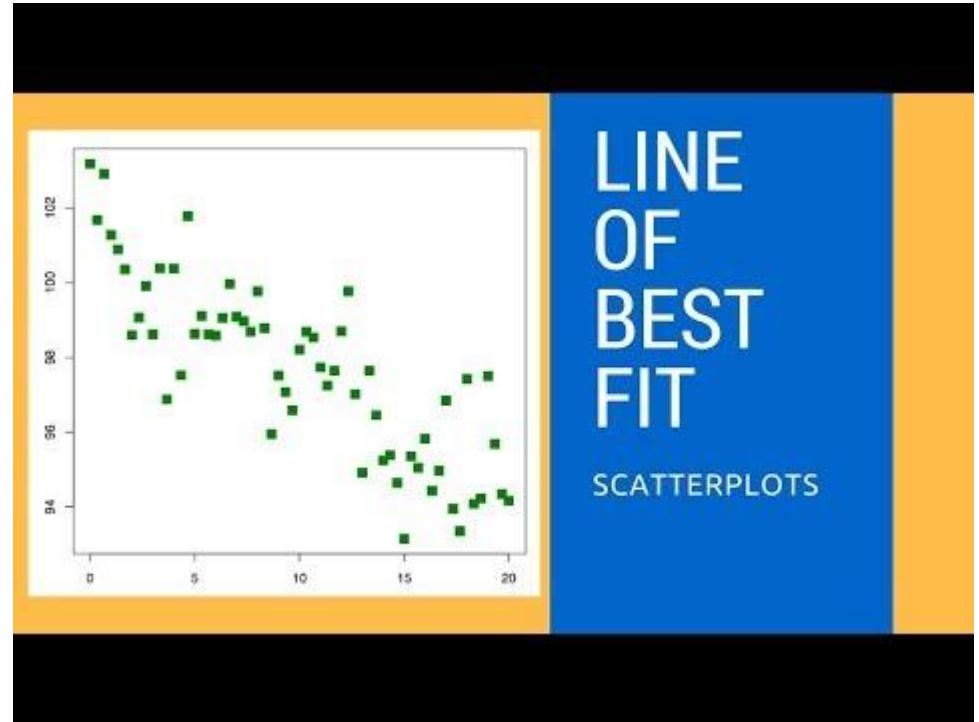
Graph C



Answer: Graph A

Video: Trend Lines

Take notes on a piece of paper as you watch this video.

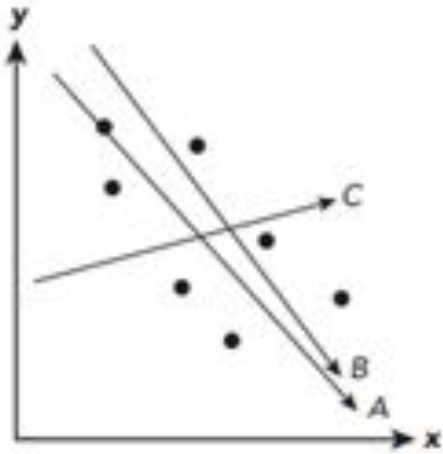


Practice 1:

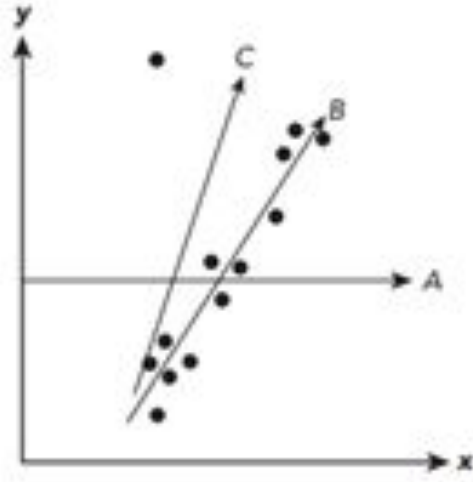
Answer Key provided

Decide which line (A, B, C) on each graph is the best trend line.

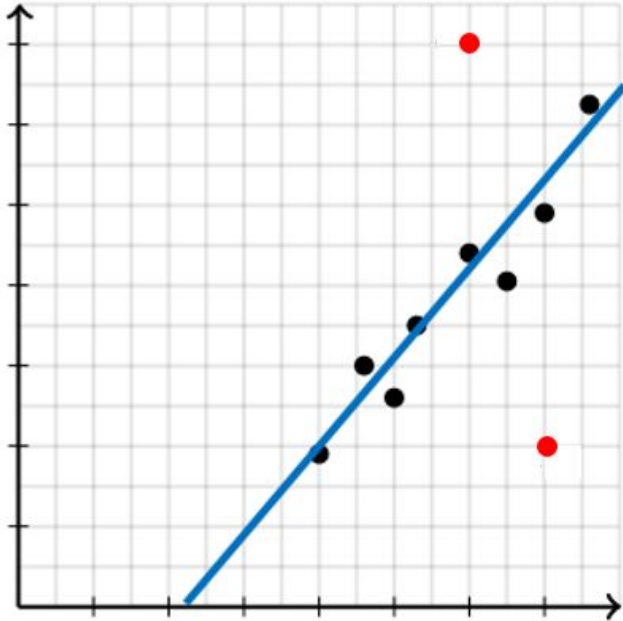
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②



How to: Draw a Trend Line



1. Determine the direction of the of the points on the graph.
*Strong association with a **positive** correlation*
2. Draw the line in the middle of the data.
This line shows a positive trend
3. Count to make sure there are the same amount of points on each side of the line of best fit.
The line crosses through two of the points, then has 3 points above the line and 3 points below the line.
4. Identify any outliers*.
There are two outliers highlighted in red:
(14,4) (12,14)

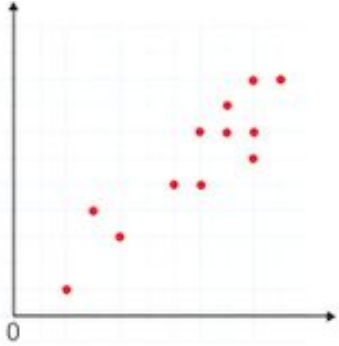
* An **outlier** is defined as: a value much greater or much less than the others in a data set.
Look for points that are significantly outside the cluster of points; that don't match the general trend of the points.

Practice 2:

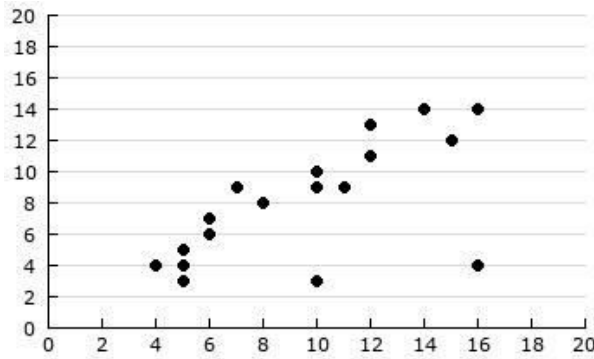
Answer Key provided

Draw a trend line for each graph.

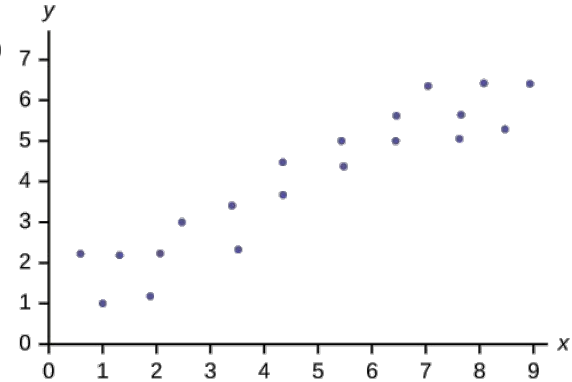
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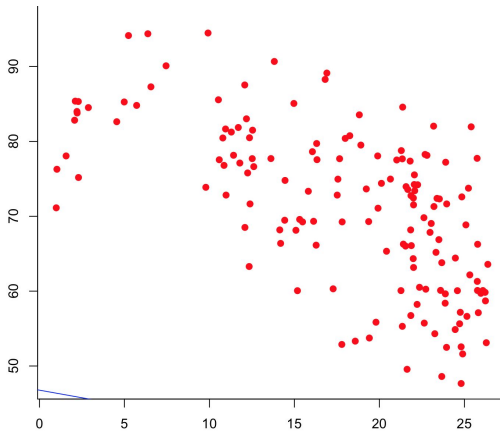
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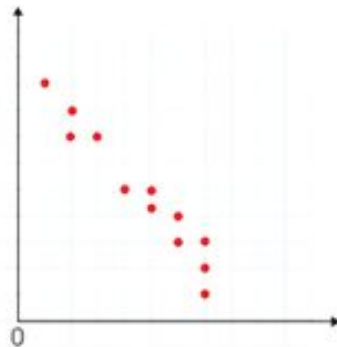
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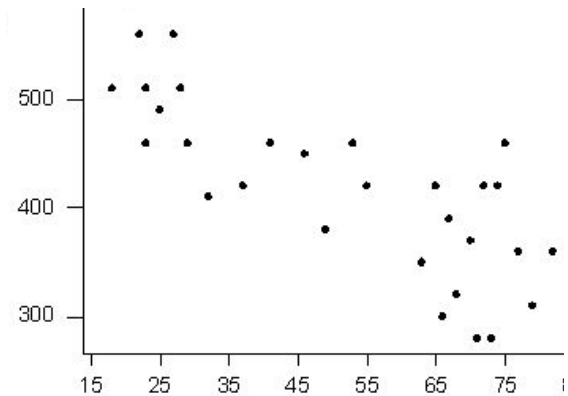
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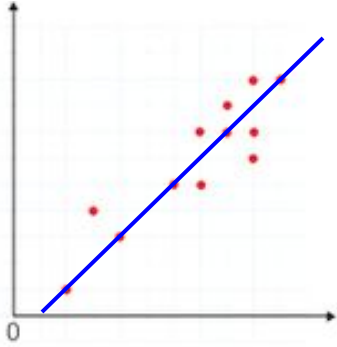


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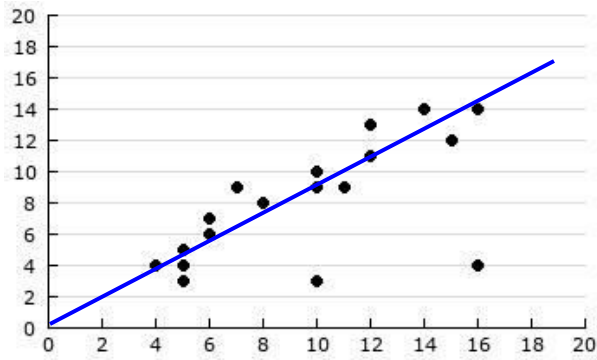


Practice 2: *Answer Key*

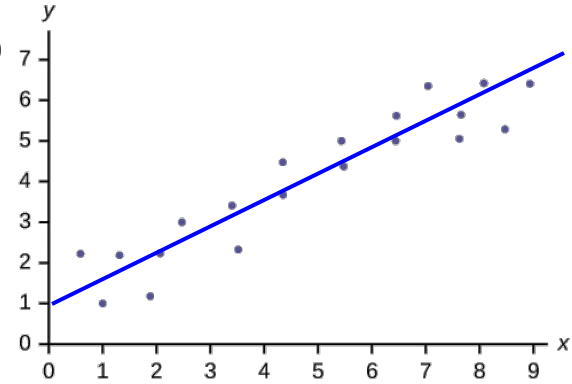
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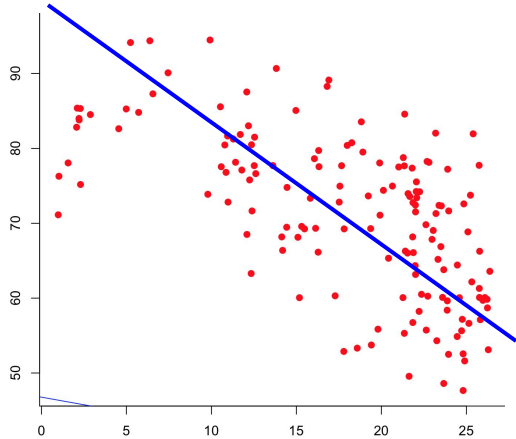
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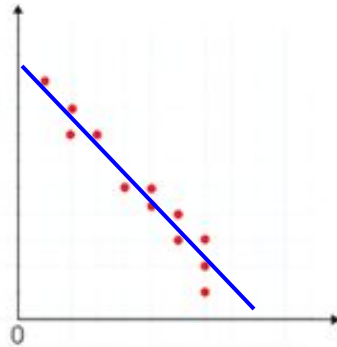
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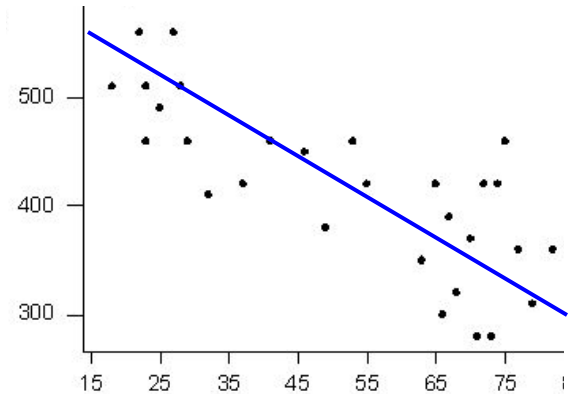
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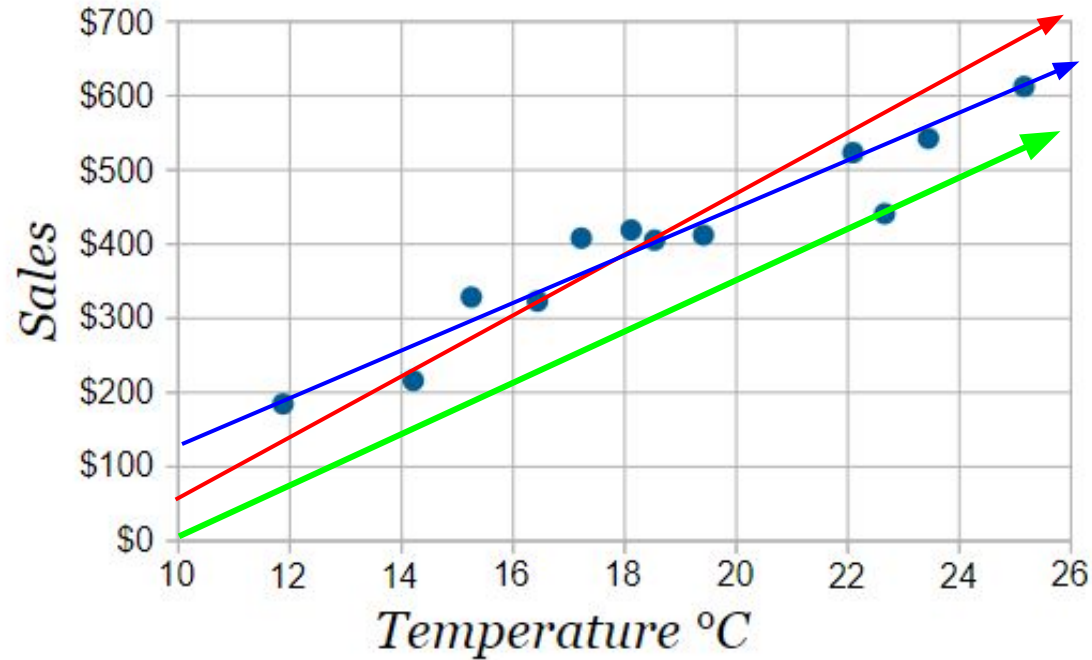


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Exit Ticket:

Select the line that represents the line of best fit for the scatter plot below.



Answer: Blue Line

Additional Resources:

[Khan Academy Lesson and Additional Practice](#)

[Online Practice](#)