

Bellwork:

Perform the following operations:

1) $-2 \frac{7}{12} \div 7 \frac{5}{8}$ 2) $4 \frac{2}{5} \left(-2 \frac{3}{5}\right)$ 3) $-1 \frac{7}{13} + \left(-2 \frac{1}{2}\right)$

4) Determine whether the given points are on the graph.

$y = 7x - 2$; (1, 5) and (2, 10)

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Homework Questions?

12) $y = x$

x	y = x
0	y = 0
1	y = 1
2	y = 2

$y = \# \text{ inches}$
 $x = \# \text{ years}$
 $10 \frac{1}{2}''$

43) $(0, -7)$, $(-6, -\frac{2}{3})$, $(-2, -3)$

$x + 3y = -11$
 $0 + 3(-7) = -11$
 $-21 = -11$ (No)

$-6 + 3(-\frac{2}{3}) = -11$
 $-6 + -2 = -11$
 $-8 = -11$ (No)

$-2 + 3(-3) = -11$
 $-2 + -9 = -11$
 $-11 = -11$ (Yes)

49) $y = 1.1x + 2$

x	y = 1.1x + 2
0	y = 1.1(0) + 2 = 2 (0, 2)
3	y = 1.1(3) + 2 = 5.3 (3, 5.3)

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Chapter 3.5(a) Scatter Plots and Trend Lines

Create and interpret scatter plots. Use trend lines to make predictions.

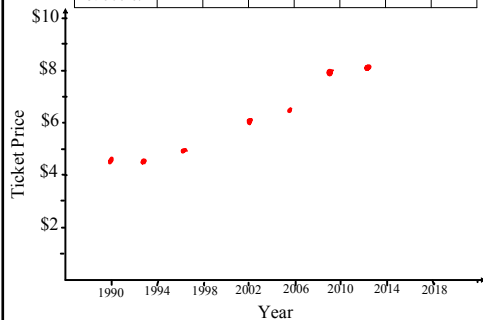
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Scatter Plot is a graph with points to show a possible relationship between two sets of data.

The table shows the average cost in movie tickets for the last 20 years. Graph a scatter plot using the given data.

Average Cost of a Movie Ticket

Calendar Year	1990	1994	1998	2002	2006	2010	2012
Ave. Cost of a movie ticket	\$4.23	\$4.18	\$4.69	\$5.81	\$6.55	\$7.89	\$7.96

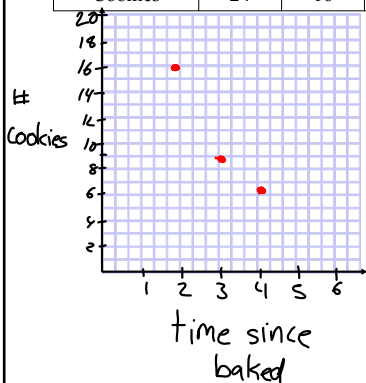


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The table shows the number of cookies in a jar from the time since they were baked. Graph a scatter plot using the given data.

Cookies in the Jar

Time since Baked (d)	1	2	3	4
Cookies	24	16	10	7



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Correlation: describes the relationship between two data sets.

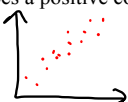
Let's Review positive, negative and no correlation.

- Work with your partner (person sitting next to you)
- Determine what is a correlation and which graph represents a positive, negative or no correlation.
- Discuss Findings with the whole class.

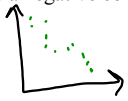
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What is a Correlation?

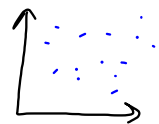
What does a positive correlation look like graphically?



What does a negative correlation look like graphically?



What does no correlation look like?



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What type of correlation do the following relationships have?

- Work with your partner
 - determine what kind of correlation the following relationships have
 - be able to defend your answer, why is it positive, negative or no correlation
 - When you finish think about what quantity in the relationship depends on the other.

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Positive Correlation

- Education and income
- Person's height and a person's age
- Hours Studying and grades
- Hours in the mall and amount of money spent

Negative Correlation

- Temperature and number of people wearing jackets
- Weight on a skateboard and speed of the skateboard
- Number of days absent and math average
- Distance traveled and amount of gas

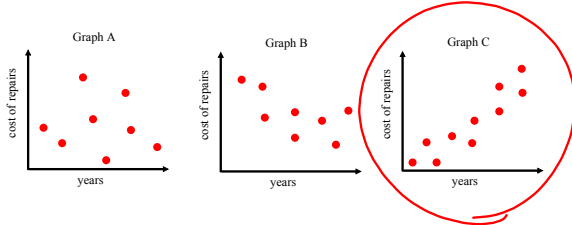
No Correlation

- Test scores and shoe size
- How tall a person is and how fast they drive
- Number of pets and number of books read

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Match the scatter plots to situations:

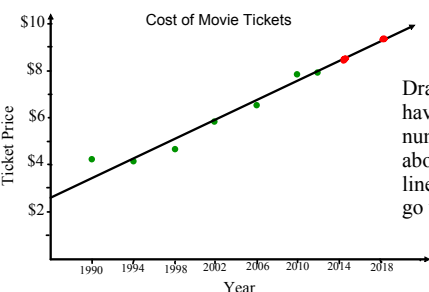
Choose the scatter plot that best represents the relationship between the age of a car and the amount of money spent each year on repairs. Explain.



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Trend line: a line drawn on a scatter plot to help show the correlation between data sets more clearly.

Cost of Movie Tickets

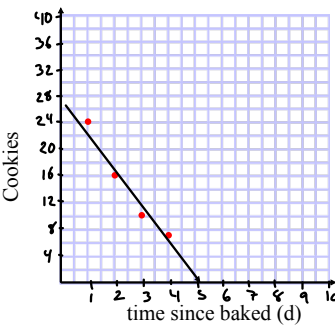


Draw a trend line by having about the same number of points above and below the line (it may or may not go through data points.)

Use the trend line to estimate the cost of a movie ticket in 2014 and in 2018.

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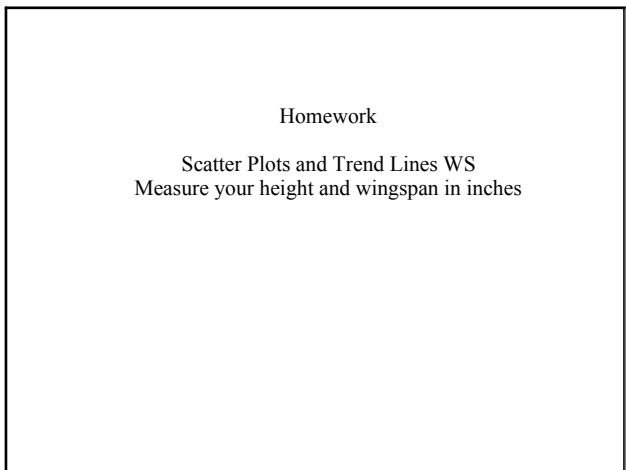
Cookies in the Jar



Draw a trend line and estimate how long until all the cookies in the jar are gone.

5 days

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Oct 2-4:56 PM



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