

Bell Work:

A-CED.1.1

Sam and Jeremy have ages that are consecutive odd integers. The product of their ages is 783. Which equation could be used to find Jeremy's age, j , if he is the younger man?

- A. $j^2 + 2 = 783$
- B. $j^2 - 2 = 783$
- C. $j^2 + 2j = 783$
- D. $j^2 - 2j = 783$

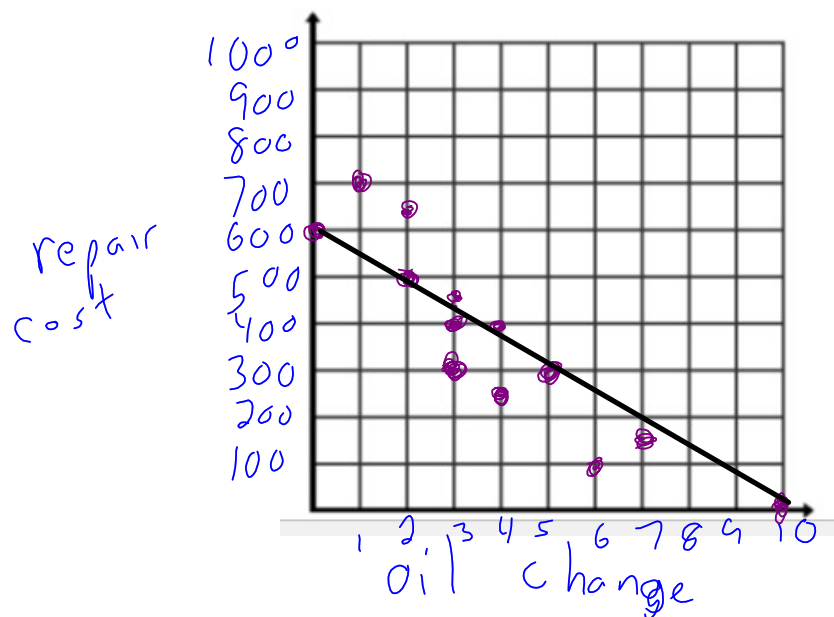
$$\begin{aligned}\text{Jeremy (sam)} &= 783 \\ j(j+2) &= 783 \\ j^2 + 2j &= 783\end{aligned}$$

1.

The table gives data relating the number of oil changes every two years to the cost of car repairs.

- a. Plot the data on the graph provided, with the number of oil changes on the horizontal axis. You will need to define your own scale.

Oil Changes	3	5	2	3	1	4	6	4	3	2	0	10	7
Repair Costs	\$300	\$300	\$500	\$400	\$700	\$400	\$100	\$250	\$450	\$650	\$600	\$0	\$150



- b. Write a sentence describing the association between the number of oil changes and the cost of car repairs. Is the association weak or strong?

strong association

~~The~~ As the number of oil changes increase,
the repair costs decrease

- c. Are there any outliers or clusters that affect the data?

There are no outliers but ~~no~~
there are clusters

- d. Draw a line of best fit for the data. Assess how well the line fits the data.

The trend line fits the data okay.

Examine the scatterplot below. Imagine that you drew a straight line through the general pattern of the points, keeping as close as possible to all points with as many points above the line as below.

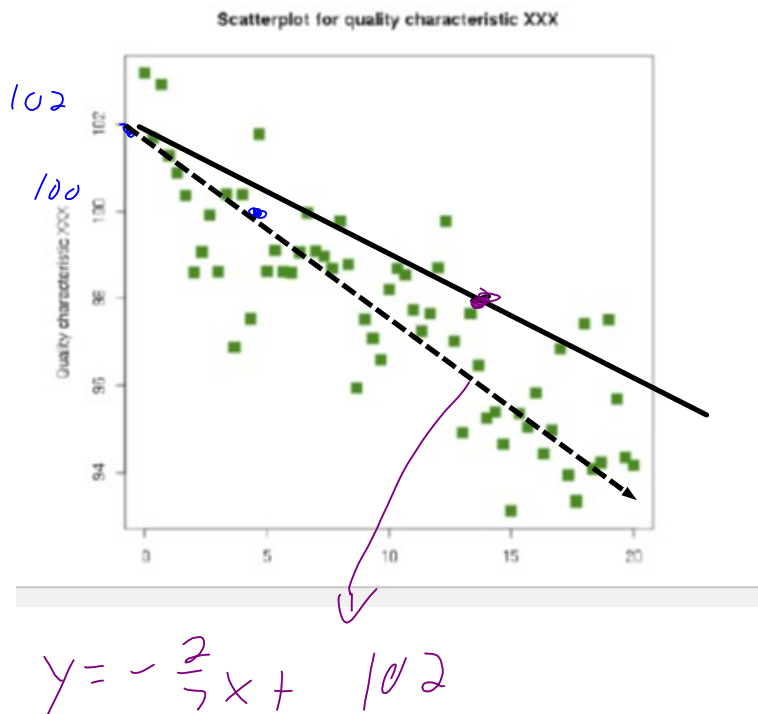
1. Predict a possible y-intercept and slope for the line you imagined.

a. y-intercept: 102

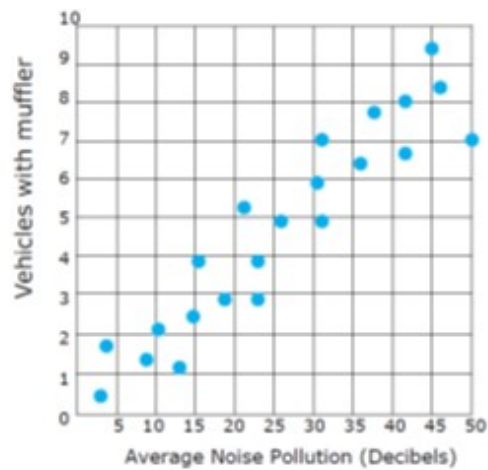
b. slope: $-\frac{4}{15}$

2. Sketch the line that you imagined for question #1 and write an equation for that line.

$$y = -\frac{4}{15}x + 102$$



A survey of 50 vehicles in each of 10 cities was taken to measure the average noise pollution and the percentage of vehicles with mufflers in their vehicles. The results are shown below.



1) The data represents which type of correlation?

A. Positive

B. Negative

C. Weak

D. Zero

2) Which statement can be concluded about the data?

- ☒ a. There is causation between the number of vehicles with mufflers and the average noise pollution.
- ☐ b. There is no correlation between the number of vehicles with mufflers and the average noise pollution.
- ☒ c. More noise pollution causes people to use more mufflers.
- ☐ d. There is a correlation but not necessarily causation between the number of vehicles with mufflers and the average noise pollution.

3) David noticed that more mufflers are used because of more noise pollution. This is incorrect for what reason?

- ☒ A. The data shows no correlation.
- ☐ B. The relationship could be related to outside factors, such as the cost of using mufflers.
- ☒ C. There is causation but no correlation between the variables.
- ☐ D. The graph shows that less noise pollution causes fewer mufflers to be used.

