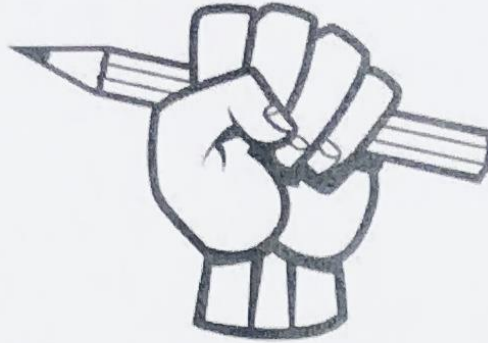


Name:

ANSWERS

Period:



Unit 7 Practice Test

Calculators OK

Question 01.

Draw a line from the description to the correct scatter plot

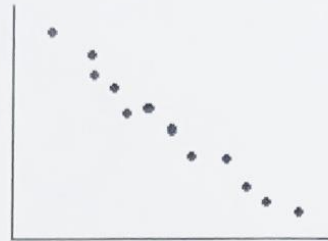
(a) A strong positive association

(b) A weak positive association

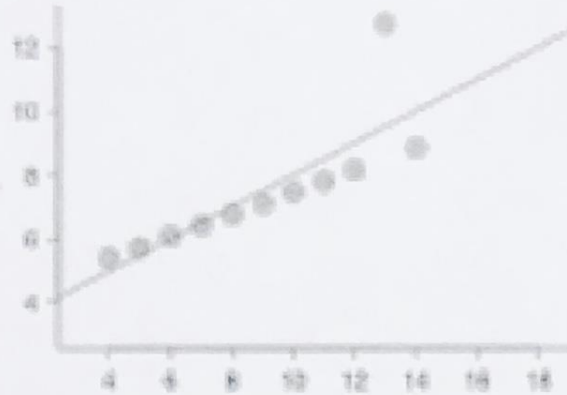
(c) A strong negative association

(d) A weak negative association

(e) No Association

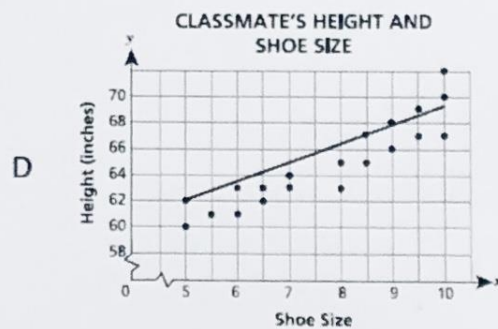
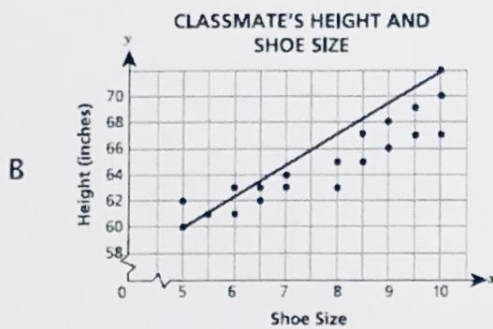
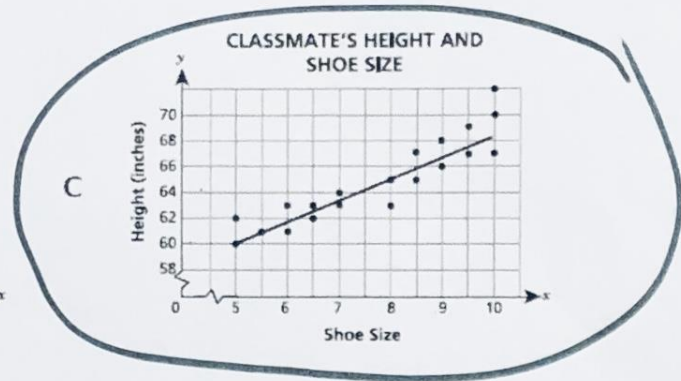
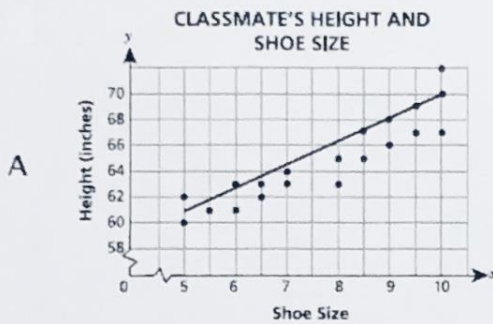


Question 02. Which one of the following best describes the trend line drawn below?



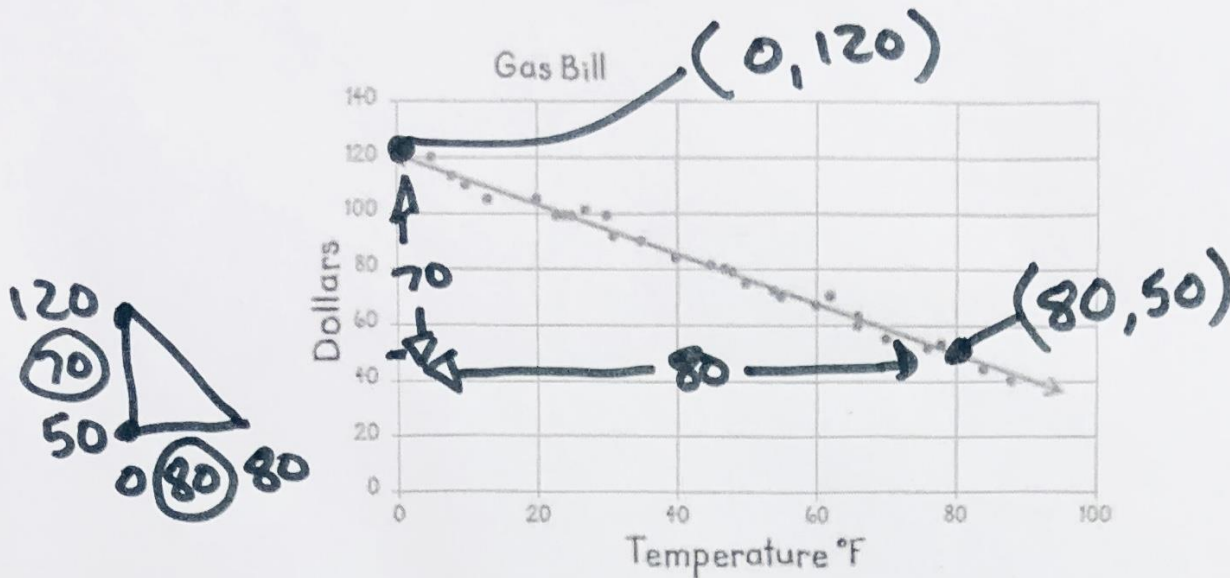
- (a) The trend line appropriately summarizes the data.
- (b) The trend line does not appropriately summarize the data because the outlier should have been ignored when drawing the trend line.**
- (c) The trend line does not appropriately summarize the data because all trend lines should begin at the origin (0, 0).

Question 03. Which one of below has the most appropriate trend line?



Questions 04–07.

The scatter plot below shows a family's monthly gas bill in dollars (y) in relation to that month's average temperature (x). Use the scatter plot to answer the questions that follow.



Question 04. In one sentence, what story does this scatter plot tell?

Generally, the higher the temperature, the lower the gas bill.

Question 05. Which one of the following best describes the association shown above?

- (a) A strong positive association
- (b) A weak positive association
- (c) A strong negative association
- (d) A weak negative association
- (e) No Association

$$\frac{\text{Rise}}{\text{Run}} = \frac{-70}{80} = -0.875$$

Question 06. Write an equation in $y = mx + b$ form for the trend line.

$$y = -0.875x + 120$$

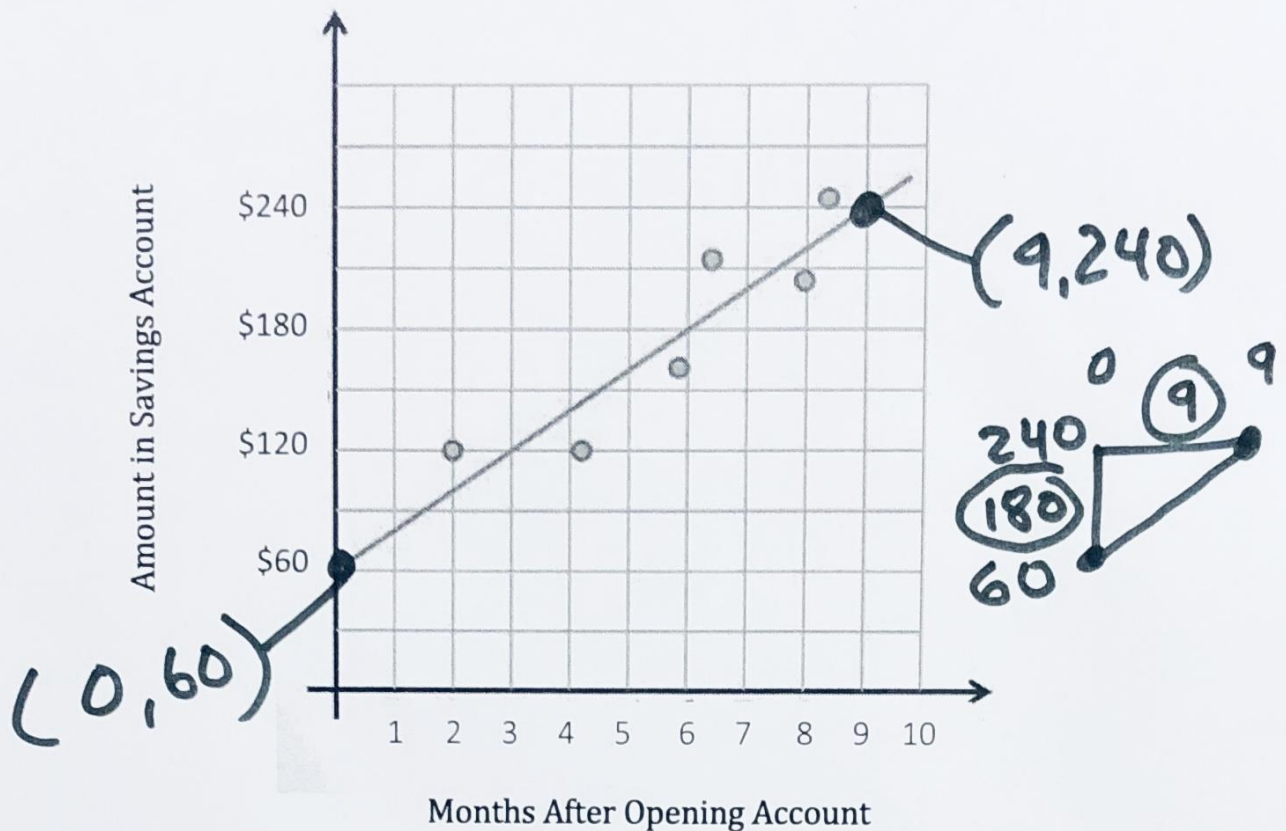
120 is the y-intercept

Question 07. Which one of the following best describes what you can predict the gas bill to be when the average temperature is 100 degrees?

- (a) \$30, and the data suggests it is very likely that the amount will be right around \$30.
- (b) \$30, but the data is not very predictive, so the prediction cannot be trusted to be accurate.
- (c) \$30, but that would be an outlier if it occurred.

Questions 08-10.

The scatter plot below shows the total amount in a savings account (y) in relation to the months after the account was opened (x). Use the scatter plot to answer the questions that follow.



Question 08. Write an equation in $y = mx + b$ form for the trend line.

$$y = 20x + 60$$

\rightarrow y-intercept is 60
 \rightarrow $\frac{\text{Rise}}{\text{Run}} = \frac{180}{9} = 20$

Question 09. About how much can you expect to be in the account after 24 months?

$$y = 20x + 60$$

$$y = 480 + 60$$

$$y = 20(24) + 60$$

$$y = 540$$

$$\boxed{540}$$

Question 10. In one sentence, what story does this scatter plot tell?

Generally, you are able to save around \$20 every month.