

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

### Writing Equations of Lines Open Response

Given two points, show how you can find the equation of the line that connects the points. **Explain and justify** the steps you take so that someone could follow them to find the equation of a line on their own given another set of points.

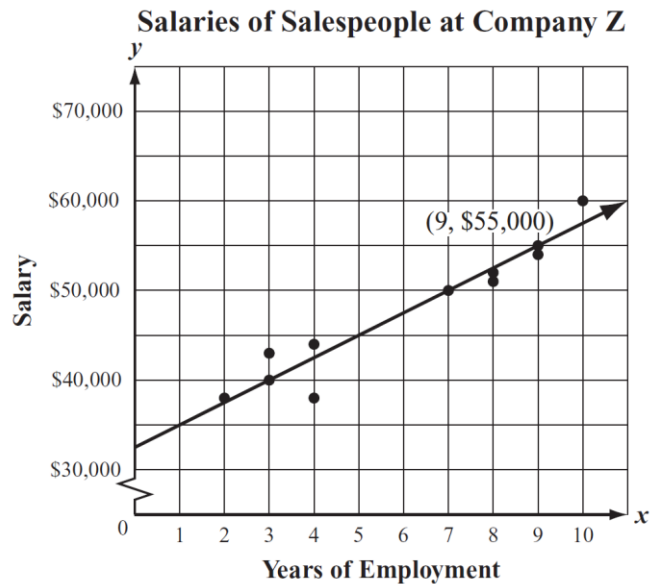
Using bullet points, or brief explanations next to your work is highly recommended! Use fractions unless you have terminating decimals.

Find the equation of the line that contains the following points:  
 $(-5, 4)$  and  $(2, -7)$

## Line of Best Fit Open Response Question

Tony collected data on the years of employment and the yearly salaries of salespeople at Company Z. He made a scatterplot and drew a line of best fit to model the data.

- a. Based on the model, what is the salary a salesperson with 3 years of employment can expect to earn? Explain how you got your answer.



- b. What is the slope of the trend line that Tony drew? Show/explain how you got your answer.

- c. What does the slope mean in the context of this situation?

- d. Tony expects his salary to be about \$70,000 after he has been employed as a salesperson at Company Z for 15 years. Is this reasonable?

Explain/show how you can figure this out without extending your graph.