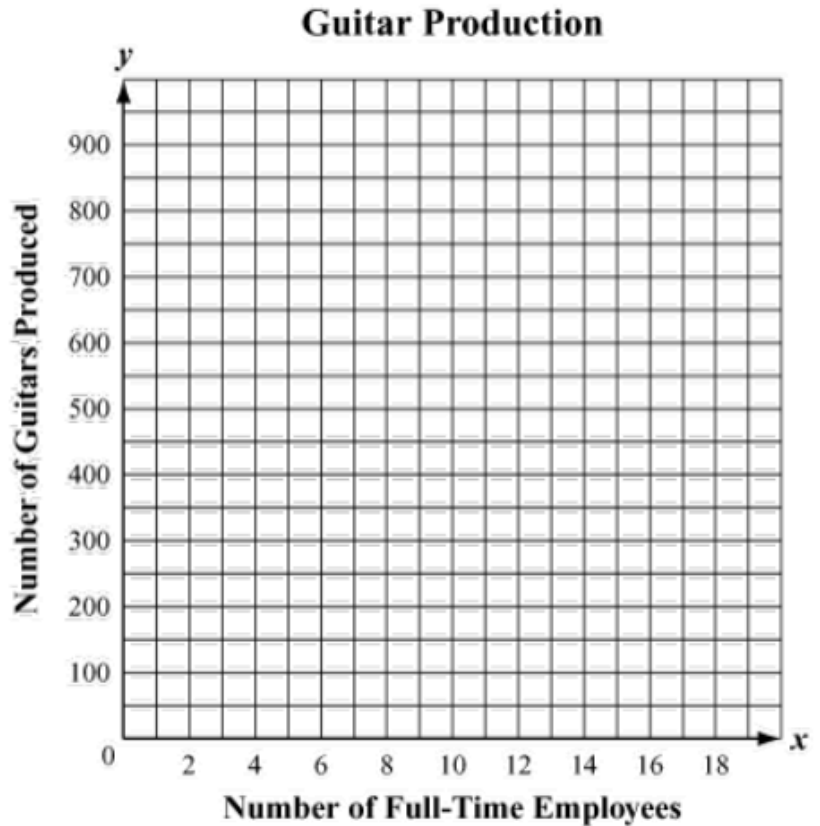


Line of Best Fit ORQ

The table below shows the number of full-time employees at eight guitar-production companies and the number of guitars produced by each company last year.

Guitar Production								
Number of Full-Time Employees	3	5	6	8	8	10	13	18
Number of Guitars Produced	98	189	235	309	336	412	494	692

- a. Create a scatterplot using the data from the table.
- b. On your scatterplot, draw a line of best fit for the data. Explain how you decided where to draw your line.



- c. Write an equation that represents the line of best fit you drew in part (b). Show or explain how you got your answer.

d. What does the slope of your line mean in the context of the situation?

e. **Use the model you created** to estimate the number of full-time employees needed if a company plans to produce 1000 guitars in a year. Show or explain how you got your answer.