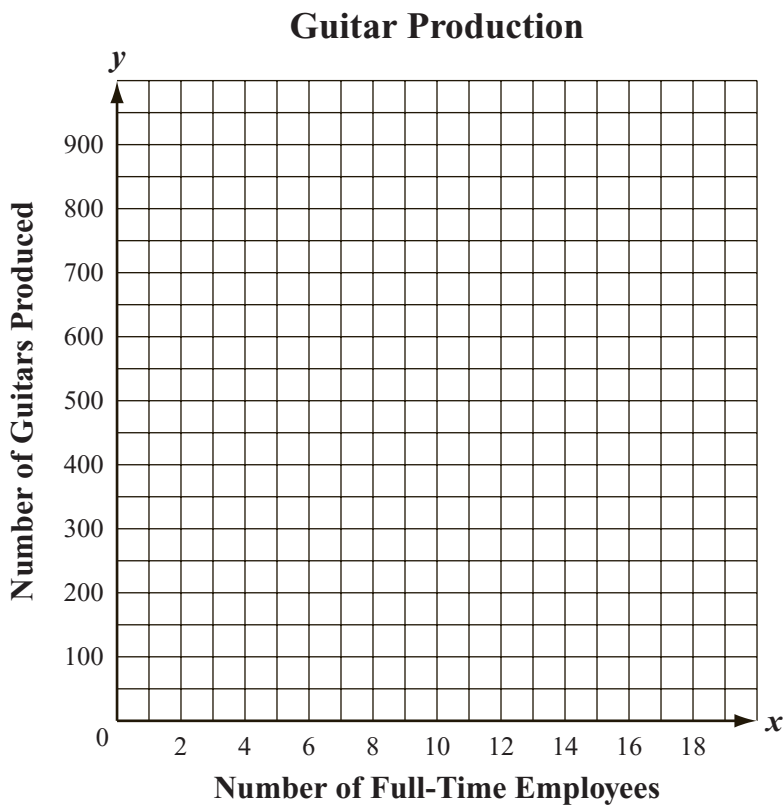**21** The table below shows the number of full-time employees at eight guitar-production companies and the number of guitars produced by each company last year.

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

On the grid in your Student Answer Booklet, copy the title, the axes, and the labels exactly as shown below.

Guitar Production

a. On your grid, create a scatterplot using the data from the table.

b. On your scatterplot, draw a line of best fit for the data.

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. Use your equation 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.