

Name:

Date:

Widget Factory

(NS02/AS01/MC01)

On-Demand (Check One) Yes No

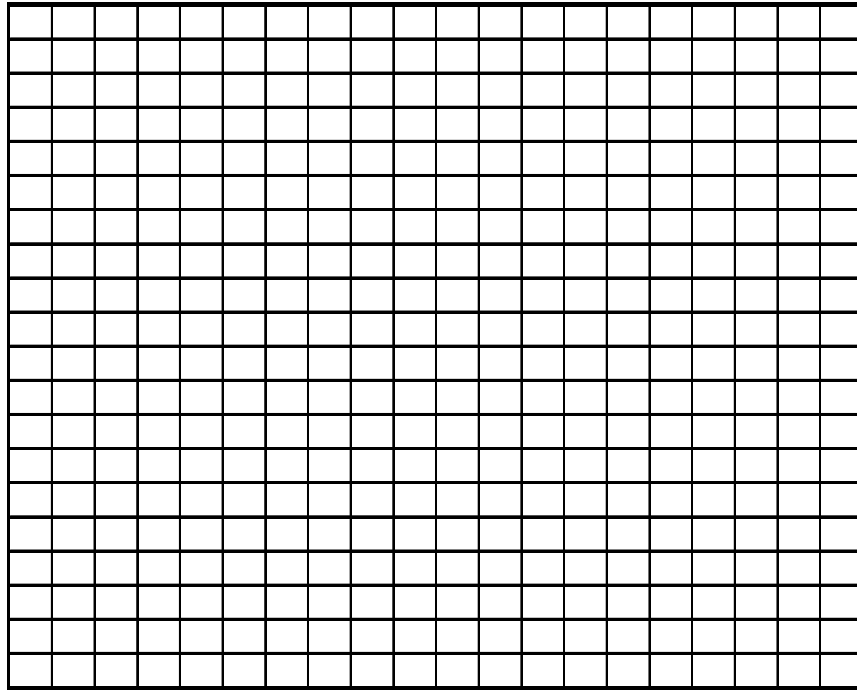
In Mr. Johnson's widget factory, workers are required to make the same total number of widgets per day, every day. The average number of widgets each worker has to make depends on how many workers show up for work. (Mr. Johnson has very lax attendance standards.) Mr. Johnson knows the average number of widgets each worker is required to make is inversely proportional to how many workers show up on a given day.

1. One day, 50 workers show up for work. On that day, each worker is required to make an average of 13 widgets. Write and solve an inverse proportion to determine the average number of widgets each worker would have to make if only 45 workers had shown up for work.

2. What impact does increasing the number of workers have on the average number of widgets each worker has to produce?

3. Write a rule to show this impact will always happen. Be sure to define all your variables.

4. Make a graph to show the relation between the average number of widgets each worker is required to make and the number of workers that show up for work. Be sure to include a title, labels for the axes, appropriate and consistent scales, and an accurate data display.



5. Describe how your rule from question #3 and your graph from question #4 both show an inverse proportion between the average number of widgets each worker is required to make and the number of workers that show up for work.
