



Personal Tutors

Chapter 14

Personal Tutor Activity 14.1 – Find the Mean

- 1. Apply** An engineer has been tasked with evaluating the data from a production run. The production line is producing a pipe that should be 27 inches with a tolerance of 1.5 inches larger and smaller. This table provides the length of the first production run of this pipe. Evaluate the data using graphical methods and statistical methods, specifically using the mean of the data. Determine if the process is in control based on this analysis.
- 2. Starting Hint** Determine the mean of the data. Then, create a line graph depicting the data.

| Sample # | Length (in inches) |
|----------|--------------------|
| 1 | 25 |
| 2 | 28 |
| 3 | 36 |
| 4 | 22 |
| 5 | 26 |
| 6 | 27 |
| 7 | 25 |
| 8 | 27 |
| 9 | 26 |
| 10 | 29 |
| 11 | 25 |

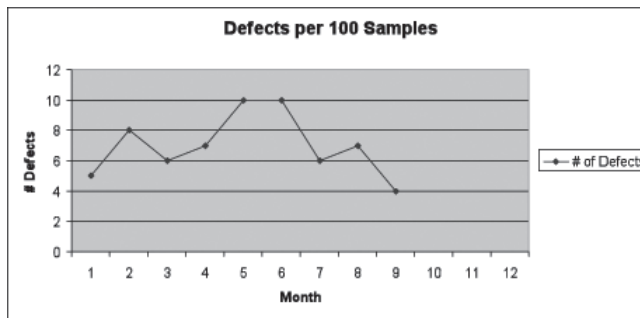


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Personal Tutor Activity 14.2 – Data Analysis

- 1. Apply** An engineer has been provided with the following graph, illustrating the number of defects out of every 100 samples of a specific product over a nine-month period of time. The engineer must determine, based on the graph, whether he or she believes there should be further investigation of the item and process.



- 2. Starting Hint** Review the graph and determine if there is a trend in the data. Then determine if any action is required based on the analysis.