

Study Time (Hours)	Grade
2	65
2	77
4	80
7	98
1	55
3	77
5	86

10. Roll two dice 100 times. Use a check sheet to record the frequency with which the numbers 2 through 12 occur. Use the same data to construct a Pareto diagram.
11. Use an appropriate data base to access sales and profits for a five- to 10-year period for a publicly traded company. Construct a run chart for both sales and profits. What can you conclude from the charts?
12. Use the data you collected in problem 11 to construct a scatter diagram. What can you conclude about the relationship between sales and profits?

### CASE STUDY 8.1: Sour Grape Ice Cream

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The Quality Ice Cream Company has recently introduced a new flavor, Sour Grape Ice Cream. They have not been able to meet demand for this new product due to quality problems—many batches have been discarded. They have collected a lot of data but are at a loss about how to use it. They are overwhelmed with numbers. They have asked you to help them address the problems. What do you recommend? *[Be specific.]*

#### PROCESS DESCRIPTION:

1. Pull ingredients from warehouse.
2. Blend ingredients in mixer.
3. Pump mixture to freeze machine.
4. Run freeze machine until consistency is correct.
5. Extrude ice cream into package.
6. Inspect and test ice cream.
7. Transfer packages to Finished Good storage.