

**GOAL** Compare effects on measures of central tendency of adding or removing values.

### Explore the Math

Each day for two rainy weeks in April, Simon researched the prediction about the probability of precipitation from a Web site.

**You will need**

- a calculator
- a data sources for weather predictions

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
75%	40%	90%	50%	100%	20%	70%
0%	60%	30%	30%	50%	50%	20%

Simon thinks that the effect of removing the greatest and least values will not have the same affect on the mean, the median, and the mode.

### ? How can you compare the effect of removing values?

- Predict. Do you agree with Simon? Justify your prediction.
- Determine the mean, median, and mode for the first 12 days of Simon's data. Round the mean to the nearest percent.
- Repeat step B for all Simon's data.
- Remove the least and greatest values from all of Simon's data, and repeat step B.
- Remove the three greatest values from all of Simon's data and repeat step B.
- Research predictions for the probability of precipitation for as many days as possible. Repeat steps B to E for your data.

### Reflecting

- Did including the last two days of Simon's data affect the measures of central tendency? Why or why not?
  - Did removing the least and greatest values from all of Simon's data affect the measures of central tendency? Why or why not?
  - Did removing the three greatest values from all of Simon's data affect the measures of central tendency? Why or why not?
- Do you think adding or removing values from data would usually affect the measures of central tendency? Justify your answer.
- Is the data you researched expressed as a fraction, a decimal, or a percent? Do you think this is the best way to express the data? Why or why not?