

## EXERCISES

1. Suppose that in a study involving only 40 participants, researchers look at self-esteem differences between two groups. They find a small, but statistically significant, difference between the self-esteem of the two groups. Based on this information, would you infer that the measure's reliability was low or high? Why?
2. List the scales of measurement in order from least to most accurate and informative.
3. Becky wants to know how much students drink.
  - a. What level of measurement could Becky get? Why?
  - b. Becky asks participants: How much do you drink?
    1. 0–1 drinks
    2. 1–3 drinks
    3. 3–4 drinks
    4. more than 4 drinks
 What scale of measurement does she have?
  - c. Becky ranks participants according to how much they drink. What scale of measurement does she have?
  - d. Becky assigns participants a “0” if they do not drink, a “1” if they primarily drink wine, and a “2” if they primarily drink beer. What scale of measurement is this?
  - e. Becky asks participants: How much do you drink?
    1. 0–1 drinks
    2. 1–3 drinks
    3. 3–4 drinks
    4. more than 4 drinks
    5. don't know
 What scale of measurement does she have? Why?
4. Assume that facial tension is a measure of thinking.
  - a. How would you measure facial tension?
  - b. What scale of measurement is it on? Why?
  - c. How sensitive do you think this measure would be? Why?
5. Suppose a researcher is investigating the effectiveness of drug awareness programs.
  - a. What scale of measurement would the investigator need if she were trying to discover whether one drug awareness program was more effective than another?
  - b. What scale of measurement would the investigator need if she were trying to discover whether one program is better for informing the relatively ignorant than it is for informing the relatively well informed?
6. In an ideal world, car gas gauges would have which scale of measurement? Why? In practice, what is the scale of measurement for most gas gauges? Why do you say that?
7. Find or invent a measure.
  - a. Describe the measure.
  - b. Discuss how you could improve its sensitivity.
  - c. What kind of data (nominal, ordinal, interval, or ratio) do you think that measure would produce? Why?



## WEB RESOURCES

1. Go to the Chapter 6 section of the book's student website and
  - a. Look over the concept map of the key terms.
  - b. Test yourself on the key terms.
  - c. Take the Chapter 6 Practice Quiz.
2. Go to the “Measure Chooser” link to practice choosing the right measure for the situation.
3. Try one of the “Scales of Measurement” tutorials.