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Choosing Effective Examples and Analogies

1. For each of the following topics, give an analogy to suit a general audience.
    a. A 12-inch snowfall
    b. Two numbers at opposite ends of a distribution
    c. An erratic pattern of change
    d. Something moving rapidly
    e. A few things
    f. Something very heavy
    g. Prices that are rising rapidly
    h. Something that has been level for a long time and then declines suddenly and substantially
    i. A repetitive pattern

2. Repeat the previous question but for a scientific audience in your field.

3. Devise short phrases to convey the concept of small size to the people listed below.
    a. A cooking aficionado
    b. A gardening nut
    c. An artist
    d. A sports fanatic

4. Each of the following analogies would work better for some audiences than others. Name a suitable audience, an unsuitable audience, and an improved analogy for the latter group.
    a. "The size of a Palm Pilot"
    b. "The gasoline shortage of the early 1970s"

5. For each of the following topics, state whether information from Illinois in 1990 would be useful as a numeric example. If so, give an example of a type of contrast in which that information could be used.
    a. Chicago in 1990
    b. Illinois in 2000
    c. Illinois schoolchildren in 1990
    d. Iowa voters in 2004

6.   Your state is considering three alternative income tax scenarios: a stable tax rate (at 5%), an increase of 0.5 percentage points, and an increase of 1.0 percentage points. Your local representative wants to know how each scenario would affect low-, moderate-, and high-income residents.
   a. What criteria could you use to define "low," "moderate," and "high" income?
   b. What kinds of numeric contrasts would you use to compare the different scenarios?
   c. Create a table to present those effects to the government budget agency.
   d. Create a chart to illustrate the effects to citizens of the state.

7.   State whether a one-unit increase would be a useful contrast for each of the following topics. If not, suggest a more reasonable increment.
   a. Annual income (in dollars) for a family of four in the United States in 2004
   b. A Likert scale measuring extent of agreement with a gun control law
   c. Cholesterol level in milligrams per deciliter (mg/dL)
   d. Proportionate increase in the unemployment rate
   e. Hourly minimum wage (in dollars) in the United States in 2004

8.   Zimmerman (2003) reports that the mean combined (verbal + math) SAT score for Williams College students in the classes of 1990−2001 was 1,396 points, with a standard deviation of 123. He estimates an OLS regression model of college GPA, with combined SAT score as an independent variable. Select a pair of plausible values to use as inputs for an illustration of effect size. (See problem set to chapter 9 for full citation.)