

## Self-Check 1.3, 1.4

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Row: \_\_\_\_\_

### Self-Check 1.3, 1.4

1. What type of measure scale is being used? Nominal, ordinal, interval or ratio.
  - a. Political outlook: extreme left, left-of-center, right-of-center, extreme right
  - b. Time of day on an analog watch
  - c. The distance in miles to the closest grocery store
  - d. The dates 1066, 1492, 1644, 1947, and 1944
  - e. The heights of 21–65 year-old women
  - f. Common letter grades: A, B, C, D, and F
2. The table shows the amounts, in inches, of annual rainfall in a sample of towns.

Rainfall (Inches)	Frequency	Relative Frequency	Cumulative Relative Frequency
2.95–4.97	6	$6/50 = 0.12$	0.12
4.97–6.99	7	$7/50 = 0.14$	$0.12 + 0.14 = 0.26$
6.99–9.01	15	$15/50 = 0.30$	$0.26 + 0.30 = 0.56$
9.01–11.03	8	$8/50 = 0.16$	$0.56 + 0.16 = 0.72$
11.03–13.05	9	$9/50 = 0.18$	$0.72 + 0.18 = 0.90$
13.05–15.07	5	$5/50 = 0.10$	$0.90 + 0.10 = 1.00$
	Total = 50	Total = 1.00	

- a. Find the percentage of rainfall that is less than 9.01 inches.
- b. Find the percentage of rainfall that is between 6.99 and 13.05 inches.
- c. Find the number of towns that have rainfall between 2.95 and 9.01 inches.
- d. What fraction of towns surveyed get between 11.03 and 13.05 inches of rainfall each year?

3. Fifty part-time students were asked how many courses they were taking this term. The (incomplete) results are shown below:

# of Courses	Frequency	Relative Frequency	Cumulative Relative Frequency
1	30	0.6	
2	15		
3			

- a. Fill in the blanks in the table above.
- b. What percent of students take exactly two courses?
- c. What percent of students take one or two courses?
4. You are concerned about the effects of texting on driving performance. Design a study to test the response time of drivers while texting and while driving only. How many seconds does it take for a driver to respond when a leading car hits the brakes?
  - a. Describe the explanatory and response variables in the study.

- b. What are the treatments?
  - c. What should you consider when selecting participants?
  - d. Your research partner wants to divide participants randomly into two groups: one to drive without distraction and one to text and drive simultaneously. Is this a good idea? Why or why not?
  - e. Identify any lurking variables that could interfere with this study.
  - f. How can blinding be used in this study?
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