

Lab Assignment 1.3, 1.4

Name: _____ Date: _____ Row: _____

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1. determine which of the four levels of measurement (nominal, ordinal, interval, ratio) is most appropriate.

- Types of movies.
- Microwave voltage measurements.
- Ratings of restaurant on a scale from 0 starts to 4 stars.
- Temperature of oven when baking a cake.

2. Sixty adults with gum disease were asked the number of times per week they used to floss before their diagnosis. The incomplete results are shown below:

# Flossing per Week	Frequency	Relative Frequency	Cumulative Relative Frequency
0	27	0.4500	
1	18		
3			0.9333
6	3	0.0500	
7	1	0.0167	

- Fill in the blanks in the table above.
- What percent of adults flossed six times per week?
- What percent flossed at most three times per week?
- What percent flossed 6 or 7 times per week?

2. Forbes magazine published data on the best small firms in 2012. These were firms which had been publicly traded for at least a year, have a stock price of at least \$5 per share, and have reported annual revenue between \$5 million and \$1 billion. Table shows the ages of the chief executive officers for the first 60 ranked firms.

Age	Frequency	Relative Frequency	Cumulative Relative Frequency
40-44	3		
45-49	11		
50-54	13		
55-59	16		
60-64	10		
65-69	6		
70-74	1		

- What is the frequency for CEO ages between 54 and 65?
- What percentage of CEOs are 65 years or older?
- What is the relative frequency of ages under 50?
- What is the cumulative relative frequency for CEOs younger than 55?

3. How does sleep deprivation affect your ability to drive? A recent study measured the effects on 19 professional drivers. Each driver participated in two experimental sessions: one after normal sleep and one after 27 hours of total sleep deprivation. The treatments were assigned in random order. In each session, performance was measured on a variety of tasks including a driving simulation. Use key terms from this module to describe the design of this experiment.

- a. Explanatory variable:
- b. Response variable:
- c. Treatments:
- d. Experimental unit:
- e. Lurking variable:
- f. Random assignment:
- g. Control group:
- f. Blinding:

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