Chapter 1 Answers:

Section 1.1:

1) Individual: Arizona worker age 16 or older.
   Variable: Mode of travel to work.
   Population: Set of mode of travel to work of all Arizona workers age 16 or older.
   Sample: Set of mode of travel to work of 500 Arizona workers age 16 or older.
   Parameter: Percentage of all Arizona workers age 16 or older with a particular mode of travel.
   Statistic: Percentage of 500 Arizona workers age 16 or older with a particular mode of travel.

3) Individual: Employees of Print-O-Matic
   Variable: Salary
   Population: Set of salaries of all employees of Print-O-Matic.
   Sample: Set of salaries of 19 employees of Print-O-Matic
   Parameter: Mean salary of all employees of Print-O-Matic
   Statistic: Mean salary of 19 employees of Print-O-Matic

5) Individual: Males in the U.S.
   Variable: Income.
   Population: Set of incomes of all males in the U.S.
   Sample: Set of incomes of 2500 males in the U.S.
   Parameter: Median income of all males in the U.S.
   Statistic: Median income of 2500 males in the U.S.

7) Individual: Defected eyeglasses manufactured by Eyeglassmatic.
   Variable: Defect type.
   Population: Set of defect type of all defective eyeglasses manufactured by Eyeglassmatic.
   Sample: Set of defect type of 25,891 defective eyeglasses manufactured by Eyeglassmatic.
   Parameter: Percentage of defect type of all defective eyeglasses manufactured by Eyeglassmatic.
   Statistic: Percentage of defect type of 25,891 defective eyeglasses manufactured by Eyeglassmatic.

9) a.) Ratio.
   b.) Nominal.
   c.) Interval.
   d.) Ordinal.

Section 1.2:

1) a.) Cluster sample
    b.) Systematic sample
    c.) Convenience sample
    d.) Simple random sample
    e.) Stratified sample
Section 1.3:

1) Experiment
3) Observation
5) Not a randomized experiment.
7) Not a randomized experiment.
9) The samples are matched.
11) The samples are matched.
13) Double blind experiment.
15) Blind experiment.
17) This is a prospective study.
19) This is a retrospective study.
21) Answer varies on this question.

Section 1.4:

1) There is no way to know if it was the deep breathing exercises or the aerobic exercises that reduced the blood pressure.
3) There are lurking variables that could be causing the poor health.
5) Talking about gun control doesn’t increase the likelihood that people will buy more guns.
7) This would be an overgeneralization.
9) There may not be practical significance.
11) The mayor should not resign.
13) The question that was asked is misleading because it leaves too much for interpretation by the employees.
15) This is a leading question.