AP* Statistics Quiz A – Chapter 2 ***Name*** _____

1. One of the reasons that the Monitoring the Future (MTF) project was started was "to study changes in the beliefs, attitudes, and behavior of young people in the United States." Data are collected from 8th, 10th, and 12th graders each year. To get a representative nationwide sample, surveys are given to a randomly selected group of students. In Spring 2004, students were asked about alcohol, illegal drug, and cigarette use. Describe the W's, if the information is given. If the information is not given, state that it is not specified.

   - Who:
   - What:
   - When:
   - Where:
   - How:
   - Why:

2. Consider the following part of a data set:

Age (years)	Sex	Only child?	Height (inches)	Weight (pounds)	Credit Hours	GPA	Major
21	Female	Yes	67.00	140.0	16	3.60	animal science
20	Female	No	62.00	130.0	18	3.86	biology
28	Female	No	64.00	188.0	21	3.25	psychology
21	Male	No	65.00	140.0	15	2.95	psychology
24	Female	No	67.00	130.0	20	3.00	anthropology
22	Male	Yes	68.00	135.0	15	2.94	journalism

   List the variables in the data set. Indicate whether each variable is treated as categorical or quantitative in this data set. If the variable is quantitative, state the units.

AP* Statistics Quiz A – Chapter 2 – Key

1. One of the reasons that the Monitoring the Future (MTF) project was started was "to study changes in the beliefs, attitudes, and behavior of young people in the United States." Data are collected from 8^{th}, 10^{th}, and 12^{th} graders each year. To get a representative nationwide sample, surveys are given to a randomly selected group of students. In Spring 2004, students were asked about alcohol, illegal drug, and cigarette use. Describe the W's, if the information is given. If the information is not given, state that it is not specified.
   - Who: 8^{th}, 10^{th}, and 12^{th} graders
   - What: alcohol, illegal drug, and cigarette use
   - When: Spring 2004
   - Where: United States
   - How: survey
   - Why: "to study changes in the beliefs, attitudes, and behavior of young people in the United States"

2. Consider the following part of a data set:

Age (years)	Sex	Only child?	Height (inches)	Weight (pounds)	Credit Hours	GPA	Major
21	Female	Yes	67.00	140.0	16	3.60	animal science
20	Female	No	62.00	130.0	18	3.86	biology
28	Female	No	64.00	188.0	21	3.25	psychology
21	Male	No	65.00	140.0	15	2.95	psychology
24	Female	No	67.00	130.0	20	3.00	anthropology
22	Male	Yes	68.00	135.0	15	2.94	journalism

   List the variables in the data set. Indicate whether each variable is treated as categorical or quantitative in this data set. If the variable is quantitative, state the units.

   Categorical: sex, only child?, major
   Quantitative: age (years), height (inches), weight (pounds), credit hours, GPA

AP* Statistics Quiz B – Chapter 2 ***Name*** _____

In November 2003 *Discover* published an article on the colonies of ants. They reported some basic information about many species of ants and the results of some discoveries found by myrmecologist Walter Tschinkel of the University of Florida. Information included the scientific name of the ant species, the geographic location, the depth of the nest (in feet), the number of chambers in the nest, and the number of ants in the colony. The article documented how new ant colonies begin, the ant-nest design, and how nests differ in shape, number, size of chambers, and how they are connected, depending on the species. It reported that nest designs include vertical, horizontal, or inclined tunnels for movement and transport of food and ants.

1. Describe the W's, if the information is given:
    - Who:
    - What:
    - When:
    - Where:
    - How:
    - Why:

2. List the variables. Indicate whether each variable is categorical or quantitative. If the variable is quantitative, tell the units.

AP* Statistics Quiz B – Chapter 2 – Key

In November 2003 *Discover* published an article on the colonies of ants. They reported some basic information about many species of ants and the results of some discoveries found by myrmecologist Walter Tschinkel of the University of Florida. Information included the scientific name of the ant species, the geographic location, the depth of the nest (in feet), the number of chambers in the nest, and the number of ants in the colony. The article documented how new ant colonies begin, the ant-nest design, and how nests differ in shape, number, size of chambers, and how they are connected, depending on the species. It reported that nest designs include vertical, horizontal, or inclined tunnels for movement and transport of food and ants.

1. Describe the W's, if the information is given:
    - Who: Colonies of ants. "Many species of ants," but no indication of exactly how many.
    - What: scientific name, geographic location, average nest depth, average number of chambers, average colony size, how new ant colonies begin, the ant-nest design, and how nests differ in architecture.
    - When: November 2003
    - Where: not specified
    - How: The results of some discoveries found by myrmecologist Walter Tschinkel of the University of Florida
    - Why: Information of interest to readers of the magazine

2. List the variables. Indicate whether each variable is categorical or quantitative. If the variable is quantitative, tell the units.

    Categorical: species, geographic location, how new ant colonies begin, and nest design.
    Quantitative: nest depth (feet), number of chambers (units), and colony size (units).

AP* Statistics Quiz C – Chapter 2 ***Name*** _____

In June 2003 *Consumer Reports* published an article on some sport-utility vehicles they had tested recently. They reported some basic information about each of the vehicles and the results of some tests conducted by their staff. Among other things, the article told the brand of each vehicle, its price, and whether it had a standard or automatic transmission. They reported the vehicle's fuel economy, its acceleration (number of seconds to go from zero to 60 mph), and its braking distance to stop from 60 mph. The article also rated each vehicle's reliability as much better than average, better than average, average, worse, or much worse than average.

1. Describe the W's, if the information is given:

- Who:
- What:
- When:
- Where:
- How:
- Why:

2. List the variables. Indicate whether each variable is categorical or quantitative. If the variable is quantitative, tell the units.

AP* Statistics Quiz C – Chapter 2 – Key

In June 2003 *Consumer Reports* published an article on some sport-utility vehicles they had tested recently. They reported some basic information about each of the vehicles and the results of some tests conducted by their staff. Among other things, the article told the brand of each vehicle, its price, and whether it had a standard or automatic transmission. They reported the vehicle's fuel economy, its acceleration (number of seconds to go from zero to 60 mph), and its braking distance to stop from 60 mph. The article also rated each vehicle's reliability as much better than average, better than average, average, worse, or much worse than average.

1. Describe the W's, if the information is given:

- Who: SUV's currently on the market. We don't know how many models.
- What: When: prior to June 2003
- Where: not specified, probably the United States
- How: testing the vehicles by driving each
- Why: information for potential consumers

2. List the variables. Indicate whether each variable is categorical or quantitative. If the variable is quantitative, tell the units.

Categorical: brand, transmission type, reliability
Quantitative: price (US$), fuel economy (mpg), acceleration (seconds), braking distance (probably feet?)