

## AP Stats – Chap 1

### Stats Starts Here! - Data

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 US.”



Data are collected from 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> 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 Ws if the information is given.

2. Consider the following part of a data set. List the variables in the data set and indicate whether it is categorical or quantitative. If it is quantitative, state the units.

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

3. 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 sound by Professor Tischel of the University of Florida. Information included the scientific name of the ant species, the geographic location, the depth of the any 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 and transport of food and ants. Describe the Ws if the information is given. List the variables. Indicate whether each variable is categorical or quantitative. If the variable is quantitative, tell the units.

Show all necessary work and place your answers on the spaces provided.

***Testing SUVs.***

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 as 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 Ws if the information is given.
2. List the variables. Indicate whether each variable is categorical or quantitative. If the variable is quantitative, tell the units.