


10:01 AM 97%

## Important Terms

- **Parameter:**  
A number that describes a population characteristic.



- **Statistic:**  
A number that describes a sample characteristic.

popul

1A) population = ALL American Households  
 sample = 1353 Am H.H. that are surveyed

1. Identify the population and the sample:

- A survey of 1353 American households found that 18% of the households own a computer.
- A recent survey of 2625 elementary school children found that 28% of the children could be classified obese.
- The average weight of every sixth person entering the mall within 3 hour period was 146 lb.

1. a) population: all American households

sample: collection of 1353 American households surveyed

b) population: all elementary school children

sample: collection of 2625 elementary school children surveyed

c) population: all people entering the mall within the assigned 3 hour period

sample: every 6<sup>th</sup> person entering the mall within the 3 hour period

2. Determine whether the numerical value is a parameter or a statistics (and explain):

- a) A recent survey by the alumni of a major university indicated that the average salary of 10,000 of its 200,000 graduates was 125,000.
- b) The average salary of all assembly-line employees at a certain car manufacturer: \$33,000.
- c) The average late fee for 360 credit card holders was found to be \$56.75.

3. For the studies described, identify the population, sample, population parameters, and sample statistics.

- a) In a USA Today Internet poll, readers responded voluntarily to the question "Do you consume at least one caffeinated beverage every day?"
- b) Astronomers typically determine the distance to galaxy (a galaxy is a huge collection of billions of stars) by measuring the distances to just a few stars within it and taking the mean (average) of these distance measurements.

- 1. a) population: all American households  
sample: collection of 1353 American households surveyed
- b) population: all elementary school children  
sample: collection of 2625 elementary school children surveyed
- c) population: all people entering the mall within the assigned 3 hour period  
sample: every 6<sup>th</sup> person entering the mall within the 3 hour period

- 2. a) statistic – part of 300,000 graduates are surveyed
- b) parameter – all assembly-line employees were included in the study
- c) statistic – 360 credit cards were examined (not all)

3. a) population: all readers of USA Today; sample: volunteers that responded to the survey; population parameter: percent who have at least one caffeinated drink among all readers of USA Today; sample statistic: percent who have at least one caffeinated drink among those who responded to the survey

- b) population: all stars in the galaxy; sample: the few stars selected for measurements; population parameter: mean (average) of distances between all stars and Earth; sample statistics: mean of distances between the stars in the sample and Earth