

Name \_\_\_\_\_

Survey Says Confidence Statements 12/8/2010

Each boldface number in the next paragraph is the value of either a **parameter** or a **statistic**. In each case, state which it is. Also identify what is being measured:

A carload lot of ball bearings has an average diameter of **2.503** centimeters (cm). This is within the specifications for acceptance of the lot by the purchaser. The inspector happens to inspect 100 bearings from the lot with an average diameter of **2.515** cm. This is outside the specified limits, so the lot is mistakenly rejected.

What are both of these numbers measuring? \_\_\_\_\_

Parameter: \_\_\_\_\_

Statistic \_\_\_\_\_

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Voter registration records show that **15.5%** of all voters in Philadelphia are registered as Republicans. However, a radio talk show host in Philadelphia found that of 20 local residents who called the show recently, **60%** were registered Republicans.

What are both of these numbers measuring? \_\_\_\_\_

Parameter: \_\_\_\_\_

Statistic \_\_\_\_\_

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A national polling organization uses a random digit dialing device to dial residential phone numbers in the United States. Of the first 100 numbers dialed, **43** are unlisted numbers. This is not surprising, because **40%** of all residential phones in the United States are unlisted.

What are both of these numbers measuring? \_\_\_\_\_

Parameter: \_\_\_\_\_

Statistic \_\_\_\_\_

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For each of the following,

- State the Sample proportion
- Find the margin of error using the formula we learned about yesterday (see your yellow notebook)
- Write a 95% confidence interval

A 2007 Harris Poll of 1052 adults found that 589 now favor the U.S. Supreme Court decision in *Roe v. Wade*. This is the highest level since 1998 and an increase of 7 percentage points from the previous year.

Sample Proportion \_\_\_\_\_

Margin of error \_\_\_\_\_

We are 95% confident that the percentage of US adults who now favor the U.S. Supreme Court decision in *Roe v. Wade* is between \_\_\_\_\_ and \_\_\_\_\_.

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**Honesty and Wall Street?** In April 2006, the Harris Poll asked a random sample of 1016 adults if they agreed with the following statement. “Most people on Wall Street would be willing to break the law if they believed they could make a lot of money and get away with it.” It found that 640 agreed with the statement.

Sample Proportion \_\_\_\_\_

Margin of error \_\_\_\_\_

We are 95% confident that the percentage of US adults who agree with the statement is between \_\_\_\_\_ and \_\_\_\_\_.

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The results of a Gallup poll released November 2010, 38% of Americans who choose to *describe themselves as overweight*. Gallup polled a random sample of 1,021 adults.

Sample Proportion \_\_\_\_\_

Margin of error \_\_\_\_\_

We are 95% confident that the percentage of US adults who \_\_\_\_\_ is between \_\_\_\_\_ and \_\_\_\_\_.

<http://www.gallup.com/poll/144941/Exceed-Ideal-Weight-Goal.aspx>

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Also do SIMMS p 310 4.1, 4.3 and 4.5.