

**1-sample z-intervals for proportions**

**Presidential Pete** is on the home stretch of his campaign and wants to know if the polls predict that he will win the Podunk election. A recent poll of 1020 randomly selected Podunk registered voters found 484 responding in favor of Pete.

- a) Construct and interpret a 95% confidence interval for the true proportion of all voters in Podunk who would vote for Presidential Pete.

- b) Carefully interpret the meaning of the 95% confidence level. *(only interpret confidence LEVEL if specifically asked to)*

**Once I get it, what does a confidence interval mean?**

- 1) Pete needs more than 50% of the vote to win the election. Based on our interval, can we make a prediction about whether Presidential Pete is likely to win?
- 2) How would raising the confidence level to 98% change the interval?
- 3) Pete wants another poll taken but only has enough campaign money left to poll 500 voters. What would this change in sample size do to the interval?

