

# Lecture 20: Single Proportion Test

## Chapter 6.1

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- ▶ What was  $n$ ?
- ▶ What is the **SE** of  $\hat{p} = 44\% = 0.44$ ?
- ▶ What is the sampling distribution of  $\hat{p}$ ?

# Question for Today

# Conditions for Sampling Dist'n of $\hat{p}$ Being Nearly Normal

What  $p$  to use?



## Back to Poll

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# Confidence Intervals

# Hypothesis Tests

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Thomas Carcetti is running for mayor of Baltimore. His campaign manager **claims** he has more than 50% support of the electorate.

The Baltimore Sun collects a random sample of  $n = 500$  likely voters and finds that 52% support him. Does this provide convincing evidence for the claim of Carcetti's manager at the 5% significance level?

# Hypothesis Tests

## Next Time

Same as with the jump from

$$\mu \text{ to } \mu_1 - \mu_2$$

i.e. from one to two-sample tests for means, we make the jump from

$$p \text{ to } p_1 - p_2$$

i.e. from one to two-sample tests for proportions.