Lecture 20: Single Proportion Test

Chapter 6.1

Question for Today

According to a poll done by the New York Times/CBS News in June 2012, only about 44% of the American public approved of the Supreme Court's performance.

The sample proportion $\widehat{p} = 0.44$ is point estimate of p: the true proportion of the American public who approves.

What are some next things to ask?

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

Question for Today

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

What p to use?

Back to Poll

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Confidence Intervals

Hypothesis Tests

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

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

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

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

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