

approval rating $p = 0.19$

$n = ?$

margin of error ± 0.04
95% Confidence.

margin of error $= z * SE$

$$0.04 = 1.96 * \sqrt{\frac{p(1-p)}{n}}$$

$$0.04 = 1.96 * \sqrt{\frac{0.19 * 0.81}{n}}$$

$$(0.04)^2 = \frac{1.96^2 * 0.19 * 0.81}{n}$$

$$n =$$

Do majority of Americans
support nuclear arm reduction

$$n = 1028 \quad p = 56\%$$

$$H_0: \mu \leq 0.50$$

$$H_1: \mu > 0.50$$

$$Z = \frac{\text{point estimate} - \text{null value}}{SE}$$

$$= \frac{0.56 - 0.50}{\sqrt{\frac{0.50(1-0.50)}{1028}}} \rightarrow$$

$$Z = 3.85$$

$P = \alpha$ from z-tables

Z_6 $p < 0.05$ reject H_0

\Rightarrow majority of Americans
support nuclear arm
reduction.