Answer on Question #76492 – Math – Statistics and Probability

Question

Suppose that a survey reported that 46% of respondents favored gun control, a margin of error of 3 percentage points.

What was the approximate size of the sample, n? (round answer to the nearest whole number)

Solution

The approximate size of the sample is given by the formula:

$$n = p(1-p)\left(\frac{z^*}{E}\right)^2$$

$z^* = 1.96$ for 95% confidence level.

$$n = 0.46(1 - 0.46)\left(\frac{1.96}{0.03}\right)^2 = 1060.$$

Answer: 1060.