

Answer on Question #67657 – Math – Statistics and Probability

Question

A research company polled a random sample of 834 teens about Internet use. 43% of those teens reported that they had misrepresented their age online to gain access to websites and online services. Calculate the standard error of p .

Solution

The standard error of sample proportions is denoted by SE_p and it is given by the following formula

$$SE_p = \sqrt{\frac{\hat{p}(1 - \hat{p})}{n}}$$

We have that

$$n = 834, \hat{p} = 0.43.$$

Then the standard error of p is

$$SE_p = \sqrt{\frac{0.43(1-0.43)}{834}} \approx 0.017143.$$

Answer: $SE_p = \sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \approx 0.017143.$