- The _____ _____ _____ gives a limit on how much the response of a sample would differ from the responses of a population.

$$MOE = \pm\sqrt{\frac{1}{n}}\%$$

- If the percent of the sample responding is p, then the percent of the population that would respond the same way is between:

$$p - \sqrt{\frac{1}{n}}\% \text{ and } p + \sqrt{\frac{1}{n}}\%$$

1. Find the margin of error for a survey with a sample size of 664 people.

2. Find the margin of error for a survey with a sample size of 773 people.

3. Find the margin of error for a survey with a sample size of 3444 people.

What do you notice happens to the margin of error as the sample size gets bigger?

4. Find the results for a survey with a sample size of 664 people and a 54% "yes" rate.

5. Find the margin of error for a survey with a sample size of 773 people and a 27% "yes" rate.

6. Find the margin of error for a survey with a sample size of 3444 people and a 45.7 % "yes" rate.

- Finding the _____ _____, given the Margin of Error:

$$n = \frac{1}{decimal^2}$$

7. Given the margin of error, ± 3 %, find the sample size.

8. Given the margin of error, ± 6.2 %, find the sample size.

9. Given the margin of error, ± 0.6 %, find the sample size.

10. Given that a survey had a "yes" range of 66.7 – 77.3%, how many people were surveyed?