

Name: _____

Course & Section: _____

Electronic copies of this homework are located in D2L.

Confidence Interval PreClass

Part 1

Watch the Video: [Confidence Intervals Part 1](https://www.youtube.com/watch?v=KETRnmbztLU) (https://www.youtube.com/watch?v=KETRnmbztLU)

1. When 829 adult Minnesotans were surveyed, 51% of them were opposed to the use of the photo-cop for issuing traffic tickets. Using these survey results, find the best point estimate of the proportion of all adult Minnesotans opposed to photo-cop use.

- a. 51%
- b. 40%
- c. 50%
- d. 0.51

2. What symbol is used for the point estimate?

A) p B) \hat{p} C) \bar{x} D) μ

3. The sample proportion was 51%, which means the number in the sample of 829 who said they were opposed to the use of the photo-cop was _____. Round to the nearest whole number.

- a. 423
- b. 829

Part 2

Watch the Video: [Confidence Intervals Part 2](https://www.youtube.com/watch?v=89PBsO8bP7I) (https://www.youtube.com/watch?v=89PBsO8bP7I)

1. Calculate a 95% CI for the proportion of all adult Minnesotans who oppose the use of photo-cop for issuing traffic tickets.

- a. (0.476, 0.544)
- b. (0.466, 0.555)
- c. (0.482, 0.539)

2. What is the upper bound of the interval?

- a. 0.539
- b. 0.544
- c. 0.555

3. Write as a percent rounded to 1 decimal.

- a. 54.4%
- b. 55.55
- c. 53.95

4. What is the Lower Bound of the Interval?
 - a. 0.466
 - b. 0.476
 - c. 0.482

5. Write as a % rounded to 1 decimal.
 - a. 46.6%
 - b. 47.6%
 - c. 48.2%

6. What is the margin of error?
 - a. 0.034
 - b. 0.057
 - c. 0.068
 - d. 0.089

7. Write as a percent rounded to 1 decimal place.
 - a. 3.4%
 - b. 5.7%
 - c. 6.8%
 - d. 8.9%

8. Interpret the confidence interval in the context of the problem. (Be careful to use correct wording)
 - a. We are 95% confident that the proportion of all adult Minnesotans who oppose the use of phot-cop is between 47.6% and 54.4%.
 - b. We are 95% confident that the probability that any randomly selected adult Minnesotan Minnesotans who oppose the use of phot-cop is between 47.6% and 54.4%.
 - c. The probability that 47.6% and 54.4% of adult Minnesotans who oppose the use of phot-cop is 95%.
 - d. We are 95% confident that the average of all adult Minnesotans who oppose the use of phot-cop is between 47.6% and 54.4%.

Part 3

Watch the Video: [Confidence Intervals Part 3](https://www.youtube.com/watch?v=IKzI88yw0uE) (https://www.youtube.com/watch?v=IKzI88yw0uE)