2007 MC #30 Homework Problem Friday 04/03

30. A researcher has conducted a survey using a simple random sample of 50 registered voters to create a confidence interval to estimate the proportion of registered voters favoring the election of a certain candidate for mayor. Assume that the sample proportion does not change. Which of the following best describes the anticipated effect on the width of the confidence interval if the researcher were to survey a random sample of 200, rather than 50, registered voters?

(A) The width of the new interval would be about one-fourth the width of the original interval.

(B) The width of the new interval would be about one-half the width of the original interval.

(C) The width of the new interval would be about the same width as the original interval.

(D) The width of the new interval would be about twice the width of the original interval.

(E) The width of the new interval would be about four times the width of the original interval.