

S.IC.B.6: Analysis of Data

- 1 A public opinion poll was conducted on behalf of Mayor Ortega's reelection campaign shortly before the election. 264 out of 550 likely voters said they would vote for Mayor Ortega; the rest said they would vote for his opponent. Which statement is *least* appropriate to make, according to the results of the poll?
 - 1) There is a 48% chance that Mayor Ortega will win the election.
 - 2) The point estimate (\hat{p}) of voters who will vote for Mayor Ortega is 48%.
 - 3) It is most likely that between 44% and 52% of voters will vote for Mayor Ortega.
 - 4) Due to the margin of error, an inference cannot be made regarding whether Mayor Ortega or his opponent is most likely to win the election.

- 2 Elizabeth waited for 6 minutes at the drive thru at her favorite fast-food restaurant the last time she visited. She was upset about having to wait that long and notified the manager. The manager assured her that her experience was very unusual and that it would not happen again. A study of customers commissioned by this restaurant found an approximately normal distribution of results. The mean wait time was 226 seconds and the standard deviation was 38 seconds. Given these data, and using a 95% level of confidence, was Elizabeth's wait time unusual? Justify your answer.

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Answer Section

1 ANS: 1 REF: 081722aii

2 ANS:

Using a 95% level of confidence, $x \pm 2$ standard deviations sets the usual wait time as 150-302 seconds. 360 seconds is unusual.

REF: 081629aii