

QW College S.4 OCE

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- Question 1

1 point

Prior to the 2016 election, Remington Research Group and Axiom Strategies conducted a poll in Wisconsin to find the voting preferences of likely voters. The survey was conducted on November 1 and November 2, 2016, among 2,720 likely general election voters. The survey found that 49% of Wisconsin voters supported Hillary Clinton and 41% of Wisconsin voters supported Donald Trump. The margin of error was 1.88 percentage points, based on a 95% level of confidence.[†]

Identify the sample size and sample statistics in this study.

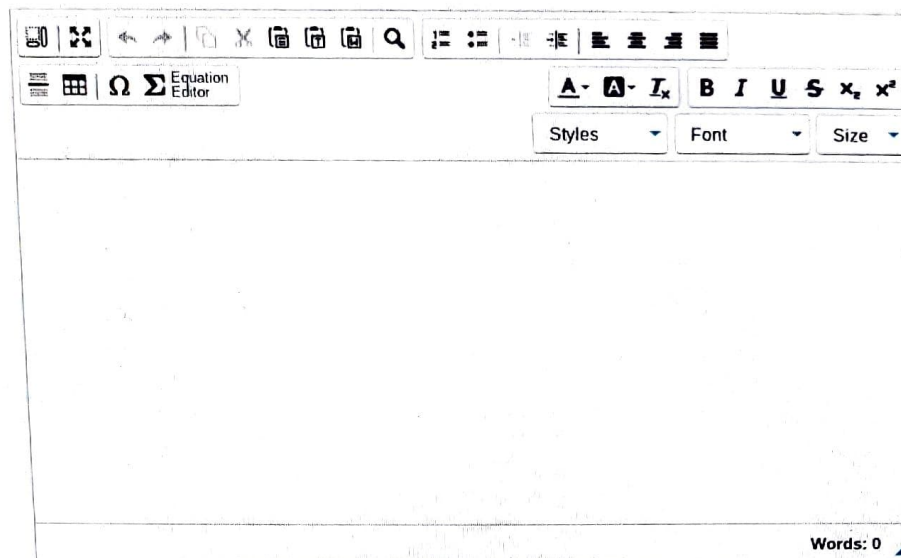
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[†]"Poll Update," HuffPost Pollster, accessed 30 May, 2017, <http://elections.huffingtonpost.com/pollster/polls/remington-research-group-r-axiom-strategies-26765>.

Question 2

1 point

Refer to Question 1 above to identify the population parameters of interest in this study.



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Question 3

2 points

How Did I Do?

Use the information in Question 1 above to create an interval estimate for the proportion of all Wisconsin voters who supported Hillary Clinton.

Submit answers as percentages and include two decimal places.

Make sure that you fill in each answer area before checking "How Did I Do?".

(%, %)

Question 4

2 points

How Did I Do?

Use the information in Question 1 above to create an interval estimate for the proportion of all Wisconsin voters who supported Donald Trump.

Submit answers as percentages and include two decimal places.

Make sure that you fill in each answer area before checking "How Did I Do?".

(%, %)

- Question 5

2 points

How Did I Do?

Let's investigate the accuracy of these interval estimates. Donald Trump ultimately won the majority of votes in Wisconsin. To identify the percentage of voters who actually voted for Donald Trump and Hillary Clinton, go to the presidential election results on the *New York Times* website: <http://www.nytimes.com/elections/results/president>.

Identify the percentage of votes which Clinton and Trump received in Wisconsin.

Make sure that you fill in each answer area before checking "How Did I Do?"

Did the interval estimate in Question 3 above for Clinton capture the actual percentages of voters who voted for Clinton in Wisconsin?

☐ (i) yes ☐ (ii) no

Did the interval estimate in Question 4 above for Trump capture the actual percentages of voters who voted for Trump in Wisconsin?

☐ (i) yes ☐ (ii) no

- Question 6

1 point

Possible Sources of Bias in the 2016 Presidential Election

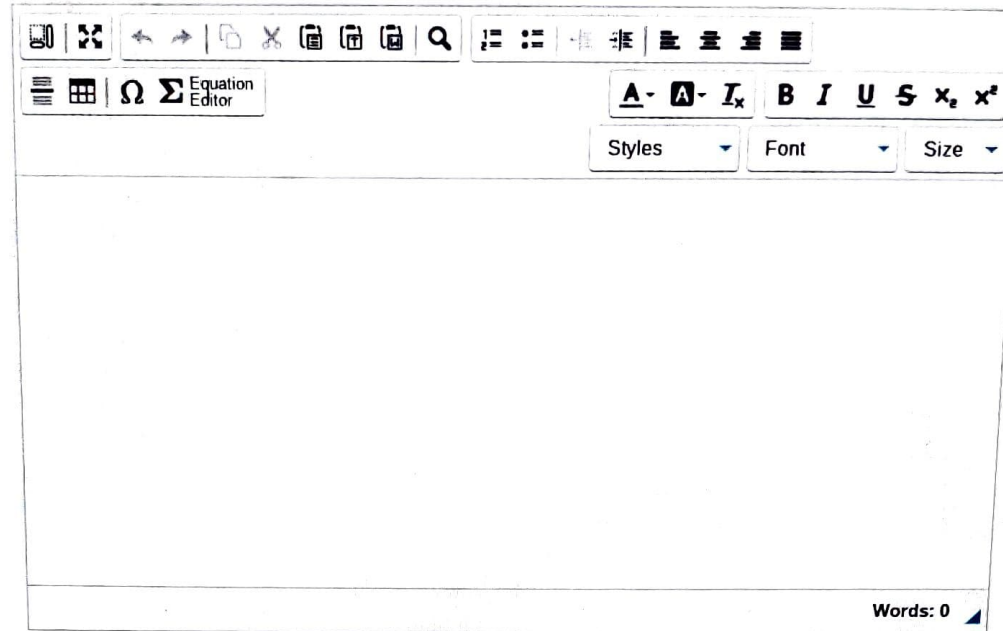
Watch the video below, "Why 2016 Election Polls Missed their Mark," from the Pew Research Center.



Submit Assignment

Quit & Save

The video describes three main sources of sampling bias which could have caused the pre-election polls to be inaccurate. Explain, in your own words, each possible source of sampling bias.



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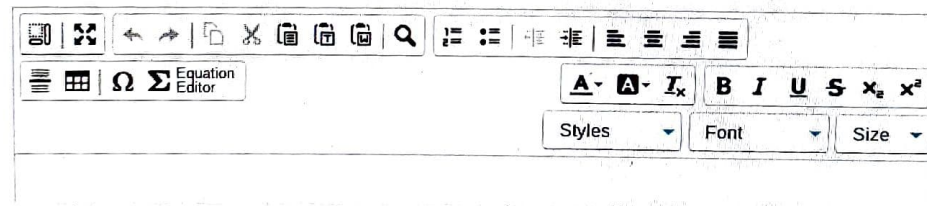
- Question 7

1 point

The Impact of Fake News

Read the article, "Many Americans Believe Fake News Is Sowing Confusion," from the Pew Research Center, available at the following link: <http://www.journalism.org/2016/12/15/many-americans-believe-fake-news-is-sowing-confusion/>.

Read the first five paragraphs of the article. What are the sample and population of interest in this study?



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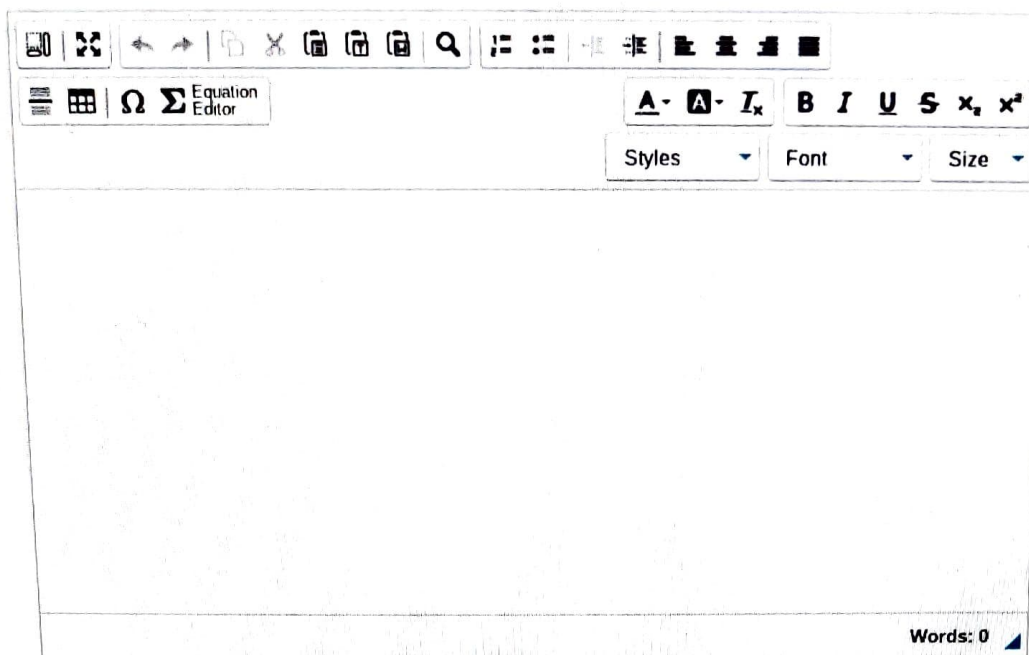
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- Question 8

1 point

What are three sample statistics from the study in Question 7 above?

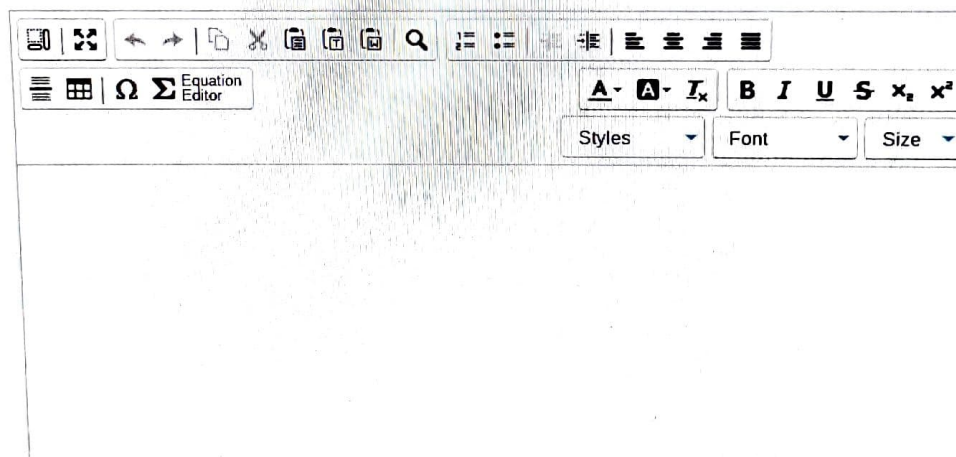


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- Question 9

1 point

What is the one population parameter that is of most interest to you from the study in Question 7 above? What would you like to know about the population?



A rich text editor interface similar to the one in Question 8. It has a toolbar with icons for undo, redo, bold, italic, underline, strikethrough, text color, background color, bulleted list, numbered list, link, unlink, and search. Below the toolbar are buttons for text alignment (left, center, right, justified) and a 'Text' button. The main editing area is a large, empty rectangular box. At the bottom right of the editor, it says 'Words: 0'.

- Question 10

2 points

How Did I Do?

The study in Question 7 above estimates that 64% of U.S. adults believe fake news has caused a great deal of confusion about basic facts of current events. The poll reported a margin of error of 3.6 percentage points at the 95% confidence level. Use this information to create an interval estimate for the percentage of all U.S. adults who believe fake news has caused a great deal of confusion about basic facts of current events.

Submit answers as percentages and include one decimal place.

Make sure that you fill in each answer area before checking "How Did I Do?".

(%, %)

- Question 11

1 point

How Did I Do?

Which statement(s) below provide(s) an accurate interpretation of the previous 95% confidence interval from Question 10 above? Select all that apply.

- ☐ (i) If different, but similarly obtained, sample proportions were used to estimate the unknown population parameter, 95% of these sample proportions would be within 3.6 percentage points of the unknown population parameter.
- ☐ (ii) There is a 95% probability that 64% of U.S. adults believe that fake news has caused a great deal of confusion about basic facts related to current events.
- ☐ (iii) We can conclude with certainty that the proportion of U.S. adults who believe that fake news has caused a great deal of confusion about basic facts related to current events is within 3.6 percentage points of the sample statistic of 64%.
- ☐ (iv) 95% of interval estimates created from similarly obtained sample proportions would capture the actual proportion of all U.S. adults who believe fake news has caused a great deal of confusion about basic facts related to current events.

- Question 12

1 point

How Did I Do?

The study in Question 10 examined whether different subgroups of U.S. adults held different views on the impact of fake news. For example, the study considered whether there is a relationship between income level and views on the impact of fake news. Do the results of the study show that a correlation exists between these two variables?

- ☐ (i) yes
- ☐ (ii) no

- Question 13

3 points

Concerns about Global Warming among U.S. Adults

A Gallup poll, conducted between March 1 and March 5, 2017, surveyed U.S. adults about their concerns and beliefs

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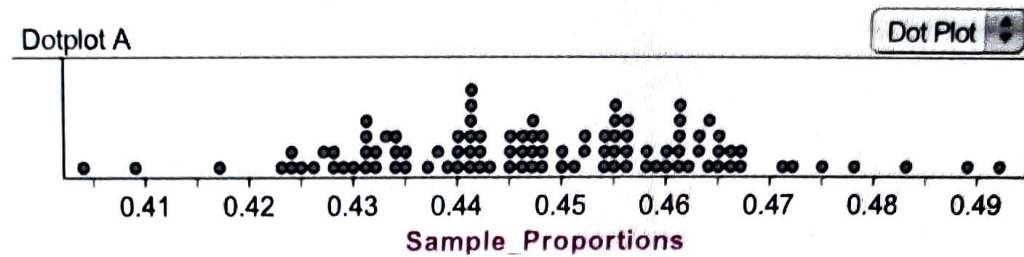
How Did I Do?

- Question 14

2 points

How Did I Do?

Let's assume that 45% is the population proportion from the Gallup poll in Question 13—the actual proportion of all U.S. adults in March 2017 who worry a great deal about global warming. A computer simulation was used to generate random samples of size 1000 from this population. The dotplot below displays 100 of these sample proportions. The margin of error is approximately 4 percentage points at the 95% confidence level.



Make sure that you fill in each answer area before checking "How Did I Do?".

- a. How many sample proportions are outside the margin of error from 0.45?

Number

- b. Which sample proportions will produce interval estimates that do not capture the population parameter?

Equation Editor

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