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1.2.3 Quiz: Absolute vs. Percent Change in Demand

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Question 1

1/1 point (graded)

Here's subway fare and ridership data for Boston and New York for the years 1979-1982.

| | Boston | | New York | |
|-------------|---------------------------------|--|---------------------------------|--|
| <u>Year</u> | <u>Subway Fare (in dollars)</u> | <u>Annual Ridership (in millions, rounded)</u> | <u>Subway Fare (in dollars)</u> | <u>Annual Ridership (in millions, rounded)</u> |
| 1979 | 0.25 | 156 | 0.50 | 1077 |
| 1980 | 0.50 | 158 | 0.60 | 1009 |
| 1981 | 0.75 | 143 | 0.75 | 1011 |
| 1981 | 0.60 | 144 | 0.75 | 989 |

Fare prices are in dollars, but we'll also continue to use the units of cents (1 hundredth of a dollar) to simplify wording. For example, 50 cents instead of 0.5 dollars.

Which city had greater change in ridership when prices changed from 50 to 75 cents?

☒ New York City ✓

☐ Boston

☐ The change in ridership was about the same.

☐ It's impossible to tell from the data.

Explanation

New York City's ridership went from 1077 million to 1011 million between 1979 and 1981. Boston's ridership went from 158 million to 143 million between 1980 and 1981. New York City's ridership decreased by 66 million while Boston's decreased by 15 million when fares rose from 50 to 75 cents. ✎

Submit

You have used 2 of 2 attempts

i Answers are displayed within the problem

Question 2

1/1 point (graded)

Which city had a greater percent change in ridership when fares increased from 50 to 75 cents?

☐ New York City☒ Boston ✓☐ The change in ridership was about the same.☐ It's impossible to tell from the data.

Explanation

The percent change in ridership in New York City was $66/1077 \uparrow 6\%$. The percent change in ridership in Boston was $15/158 \uparrow 9\%$. Boston had a greater percent change in ridership.

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You have used 1 of 2 attempts

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Question 3: Think About It...

1/1 point (graded)

Which of the the following pieces of information do you think is most relevant to understanding why Boston decreased fares after the increase from 50 to 75 cents but New York did not?

Note: At this time, the text entry box for reflective questions does not support the percent symbol "%" - please type out the word "percent" if you need to refer to percents.

- Total decrease in ridership
- Percent decrease in ridership
- Neither explains Boston's decision to decrease fares.

Percent decrease in ridership



Thank you for your response.

Explanation

This will be discussed in the next video.

Submit

You have used 1 of 1 attempt


 Answers are displayed within the problem

Question 4


2/2 points (graded)

For the period from 1979 to 1981, answer the following. You don't necessarily need to compute the actual values!

A) The change in fare price in Boston was 50 cents, which is greater than the change in fare price in New York of 25 cents. What about the percent change in fare?

The percent change in fare in Boston was  **Answer:** greater than the percent change in fare in New York.

B) The change in ridership in Boston was 13 million, which is less than the change in ridership in New York of 66 million. What about the percent change in ridership?

The percent change in ridership in Boston was  **Answer:** greater than the change in ridership in New York.

Explanation

A) Greater than. The percent change in fare in Boston was 200%. The percent change in fare in New York City was 50%.

B) Greater than. The percent change in ridership in Boston was about 8%, while the percent change in ridership in New York City was about 6%.

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You have used 1 of 2 attempts

 Answers are displayed within the problem

Question 5: Think About It...

1/1 point (graded)

How might you use change or percent change in price and demand to try to compare what happened from 1979 to 1981 in Boston versus New York?

Note: At this time, the text entry box for reflective questions does not support the percent symbol "%" - please type out the word "percent" if you need to refer to percents.

Regress percent change in demand as a response variable by percent change in price as a predictor.



Thank you for your response.

This will be discussed in the next video

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You have used 1 of 1 attempt

i Answers are displayed within the problem

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