

LESSON 10.1 Assignment

Name _____ Date _____

**Could You Participate in Our Survey?
Interpreting Frequency Distributions**

- Forty workers arriving at an office building in a city were asked how they got to work that day. They were also asked if they were less than 40 years old or older. The survey results are shown in the table.

Age	Transportation Method	Age	Transportation Method
<40	Subway	<40	Bus
<40	Bus	<40	Bus
40+	Walk	<40	Subway
<40	Bus	40+	Car
<40	Subway	<40	Walk
40+	Car	40+	Taxi
40+	Car	40+	Walk
40+	Walk	<40	Subway
<40	Subway	40+	Car
40+	Taxi	<40	Taxi
<40	Walk	40+	Taxi
<40	Bus	<40	Bus
<40	Subway	< 40	Bus
40+	Bus	<40	Subway
<40	Bus	40+	Walk
40+	Walk	40+	Car
40+	Taxi	40+	Subway
<40	Subway	40+	Bus
40+	Car	<40	Subway
<40	Car	40+	Taxi

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a. Identify the variables for this survey. Are the variables categorical or quantitative? Explain your reasoning.

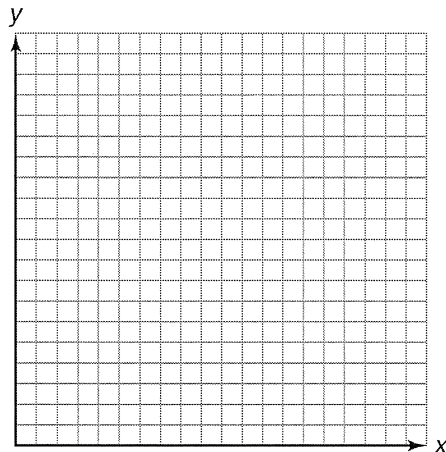
b. Construct a frequency marginal distribution for the survey data.

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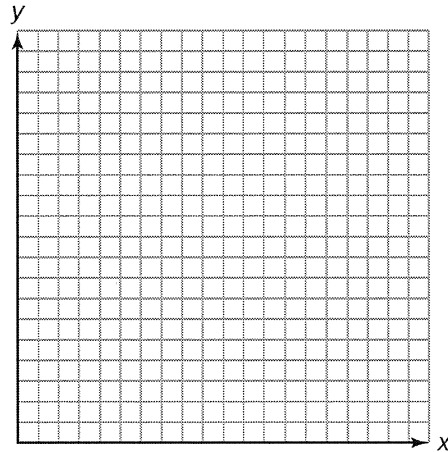
c. Analyze the frequency marginal distribution. What was the most commonly used transportation method for each age group? Explain you how determined your answer.

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- d. Construct a double bar graph of the frequencies. Let the x -axis represent the transportation method, and let the y -axis represent the number of workers. What conclusion(s) can you draw by examining this graph?



- e. Construct a double bar graph of the frequencies. This time, let the x -axis represent the age levels. What conclusions can you draw by examining the graph?



- f. The manager of a firm in the building where the survey was taken has noticed that a number of his employees have been coming in late. The late employees often say they are late because of subway problems, but he also notices it is mostly younger workers who are using this excuse. He thinks these employees may be irresponsible because most of his older employees are not coming in late. Which graph could be used to show the manager that his thinking may be wrong?

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