

Practice Problems Section 3A

Directions #1-4: Here is some data taken from the medical records department at a local hospital. The data includes gender, blood type (A, B, AB, O), Rhesus factor (Rh + or Rh -) and part of the hospital the patient was in (Medical/Surgical, Intensive Care Unit, Same Day Surgery, Emergency Room).

Gender	Blood Type	Rh Factor	Floor
M	A	-	SDS
M	O	+	ER
F	AB	+	Med/Surg
M	O	-	ICU
F	O	+	SDS
F	O	+	Med/Surg
M	A	+	SDS
F	O	+	Med/Surg
F	O	+	ER
M	B	+	SDS
F	A	-	Med/Surg
M	O	+	ICU
M	A	+	Med/Surg
F	O	-	SDS
F	B	+	ICU
M	O	+	ER
F	AB	-	ER
M	O	+	SDS
M	O	+	Med/Surg
M	A	+	ER

1. Create a contingency table that we could use to compare Rh factor (Rh+ or Rh-) to blood type (A,B,AB or O). Make the rows represent the Rh factor and the columns represent the blood type. Label the rows and columns with titles and include the grand total and all of the row and column totals in your table. What is the size of the table (# rows by # columns) not counting totals?
2. Create a contingency table that we could use to compare gender to the part of the hospital the patient went to. Make the rows represent gender and the columns represent the part of the hospital. Label the rows and columns with titles and include the grand total and all of the row and column totals in your table. What is the size of the table (# rows by # columns) not counting totals?
3. Create a contingency table that we could use to compare the Rh factor (Rh+ or Rh-) to the part of the hospital the patient went to (SDS, ER, MedSurg, ICU). Make the rows represent the Rh factor and the columns represent the part of the hospital. Label the rows and columns with titles and include the grand total and all of the row and column totals in your table. What is the size of the table (# rows by # columns) not counting totals?
4. Create a contingency table that we could use to compare the part of the hospital (SDS, ER, MedSurg, ICU) to the blood type (A,B,AB or O). Make the rows represent the blood type and the columns represent the part of the hospital. Label the rows and columns with titles and include the grand total and all of the row and column totals in your table. What is the size of the table (# rows by # columns) not counting totals?



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Directions #5-8: Open the “Math 075 Survey Data Fall 2015” in Canvas or at www.matt-teachout.org. Use StatKey to create a contingency table and stacked bar chart for the following variables. Make a rough sketch of the stacked bar chart and table on your paper. Then use the table and graph to answer the questions.

Directions for creating contingency table with StatKey:

- Open the “Math 075 Survey Data Fall 2015”. Copy and paste the two columns next to each other in a new spreadsheet. Then copy both columns together.
- Go to www.lock5stat.com and click on “StatKey”. Under the “Descriptive Statistics and Graphs” menu, click on “Two Categorical Variables”. Click the “Edit Data” button. Push “Control A” and “Delete” on your keyboard to delete out any existing data. Then paste in your two columns of data. Check the box that says “Raw Data”. If your data has a title, check the box that says “Data has a header row”. Then push “OK”. If your rows and columns are backward, push the “Switch Variables” button.

5. Use StatKey and the “Math 075 Survey Data Fall 2015” to create a contingency table and stacked bar chart for campus (Valencia or Canyon Country) and at least one tattoo (yes or no). Let the rows represent tattoo status and let the columns represent the campus.

- a) Draw a sketch of the contingency table including titles and totals.
- b) Draw a sketch of the stacked bar chart.
- c) What was the grand total?
- d) How many total students went to the Valencia campus?
- e) How many total students have at least one tattoo?
- f) How many students both did not have a tattoo and went to the Canyon Country campus?

6. Use StatKey and the “Math 075 Survey Data Fall 2015” to create a contingency table and stacked bar chart for contact lenses or glasses (yes or no) and hair color (brown, black, blond(e), red, other). Let the rows represent glasses/contacts status and the columns represent hair color.

- a) Draw a sketch of the contingency table including titles and totals.
- b) Draw a sketch of the stacked bar chart.
- c) What was the grand total?
- d) How many total students need contacts or glasses?
- e) How many total students have brown hair?
- f) How many students both did not need glasses and have black hair?

7. Use StatKey and the “Math 075 Survey Data Fall 2015” to create a contingency table and stacked bar chart for texting while driving (yes or no) and being in a car accident (yes or no). Let the car accident status represent the rows and texting while driving represent the columns.

- a) Draw a sketch of the contingency table including titles and totals.
- b) Draw a sketch of the stacked bar chart.
- c) What was the grand total?
- d) How many total students said that do not text and drive? Do you believe them?
- e) How many total students have not been in a car accident?
- f) How many students both text and drive and have been in a car accident?

8. Use StatKey and the “Math 075 Survey Data Fall 2015” to create a contingency table and stacked bar chart for live with parents (yes or no) and political party (democrat, republican, independent, other). Let the political party represent the rows and living with parents status represent the columns.

- a) Draw a sketch of the contingency table including titles and totals.
 - b) Draw a sketch of the stacked bar chart.
 - c) What was the grand total?
 - d) How many total students do not live with their parents?
 - e) How many total students identify with independent political party?
 - f) How many students are both democrat and live with their parents?
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