

**Warm Up:**

1. Which of the following has a greater rate of change?

- A)  $y = \frac{1}{3}x + 5$       B)  $y = \frac{3}{5}x + 10$       C)  $y = \frac{1}{8}x + 3$       D)  $y = \frac{6}{7}x + 12$

2. Which of the following has the greater rate of change?

- A)  $y = 3.2x + 9$       B)  $y = 3.02x + 8$       C)  $y = -3.5x + 16$       D)  $y = 3.05x + 9$

**A. Conditional Relative Frequencies**

1. The table below show the results of a survey about the student’s favorite superhero powers

	To Fly	Freeze Time	Invisibility	Super Strength	Telepathy	Total
Females	49	60	48	1	70	228
Males	51	71	27	25	48	222
Total	100	131	75	26	118	450

a)What is the relative frequency students who picked Invisibility as their favorite superhero power?

b)What percent of students who picked Freeze Time were female?

c)What percent of males picked To Fly?

d)What percent of the students picked Super Strength?

e)What percent of the females picked Telepathy?

2) Jeremy asked a sample of 40 8<sup>th</sup> grade students whether or not they had a curfew.

	Bedtime	No Bedtime	Total
Curfew	21	4	25
No Curfew	3	12	15
Total	24	16	40

a) Of the 8<sup>th</sup> grade students who had a curfew, what percent had no bedtime?

b) Of the students who have a bedtime, what percent do not have a curfew?

c) Of the 8<sup>th</sup> grade students, what percent have a curfew?

2) The table shows the grade levels and primary home languages for all the students at Martin Middle School

	6th Grade	7th Grade	8th Grade	Total
Home Language: English	104	99	116	319
Home Language: Other	56	81	84	221

- A) What percent of the 8<sup>th</sup> graders have a home language other than English?
- B) What percent of the 6<sup>th</sup> graders have a home language of English?
- C) Of the students surveyed, what percent were 7<sup>th</sup> graders?

3) A recent poll asked whether customers like a restaurant's new lunch menu.

New Menu

	Yes	No	Total
Male	13	15	28
Female	18	25	43
Total	31	40	71

- A) What percent of males liked the new lunch menu?
- B) What percent of the people that did not like the new lunch menu were female?
- C) What percent of the people surveyed were male?

4) Lucia asked 50 eighth-grade students if they agreed or disagreed with a proposed plan to start the school day at a later time. She also recorded whether each student responding was a boy or girl. Make several observations about the data.

	Boys	Girls	Total
Agree	14	12	26
Disagree	6	18	24
Total	20	30	50

Using the original data, which statement is true about the results of the survey?

- A) 30% of boys agree that the start of the school day should be later
- B) 48% of the students disagree with the later start time
- C) 52% of the students agree with the later start time
- D) 60% of the girls disagree with the later start time

**Lesson 9 HW**

1) Circle the table that will be more helpful in finding whether male or female teenagers are more likely to own a car.

**Frequency Table**  
Car Ownership

	Yes	No	Total
<b>Male</b>	49	126	175
<b>Female</b>	48	102	150
<b>Total</b>	97	228	325

**Total Relative Frequency Table**

Car Owners	Football		Baseball		Total
	No	5	Total	7	
<b>Male</b>	72%	12	100%	6	
<b>Female</b>	32%	68%	100%		
<b>Total</b>	29.8%	70.2%	100%		

Justify your answer: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2) Fifty moviegoers were surveyed about their favorite movie types.

- 13 men and 6 women chose “Action” as their favorite type.
- 8 men and 8 women chose “Drama” as their favorite type.
- 5 men and 4 women chose “Comedy” as their favorite type.
- 4 men and 2 women chose “Animated” as their favorite type.

Draw a two-way frequency table using the above data. Use the table to determine the most popular type of movie in the survey.

	Action	Drama	Comedy	Animated	Total
<b>Men</b>					
<b>Women</b>					
<b>Total</b>					

Which type of movie surveyed is most popular? \_\_\_\_\_

3) The frequency table shows the hair and eye color of 25 students. Is there evidence that blue eyes are more common for students with blond hair than those with black hair?

Write a valid conclusion. \_\_\_\_\_

4) As students walked into the cafeteria their eye color and hair color were written down.

	Blonde	Black	Brown	Total
<b>Blue</b>	3	1	2	6
<b>Brown</b>	2	7	6	15
<b>Green</b>	1	1	2	4
<b>Total</b>	6	9	10	25

A) What percent of the students have blue eyes and brown hair?

B) What percent of the students with green eyes have blonde hair?

For #5-11 A survey was taken about what sport coaches and players would rather watch professionally. Complete the table to the right and answer the questions below.

5) How many coaches participated in the survey?

- 6) How many players participated in the survey?
- 7) Which sport would the coaches rather watch?
- 8) Which sport is would most of the players watch?
- 9) What percent of the coaches prefer to watch baseball?
- 10) What percent of the people surveyed prefer to watch football?
- 11) Out of the people who prefer to watch baseball, what percent are players?

12) Twenty students were surveyed about their favorite subject. Below are the results.

- 3 boys and 4 girls chose Math
- 2 boys and 3 girls chose Science
- 1 boys and 2 girls chose ELA
- 3 boys and 2 girls chose History

Construct a two-way frequency table for the data.

	Math	Science	ELA	History	Total
Boys					
Girls					
Total					

- A) According to the table, what is the least popular subject?
- B) What percent of the boys chose math as their favorite subject?
- C) What percent of the students who chose science were girls?

15) The two- way shows the results of a survey about whether students should be required to wear school uniforms. According to the table, what percent of teenagers are in favor of wearing school uniforms?

	For	Against	Total
Parents	.42	.07	.50
Teens	.18	.32	.50
Total	.61	.39	1.00

16) If 300 parents were surveyed, how many were for wearing uniforms?