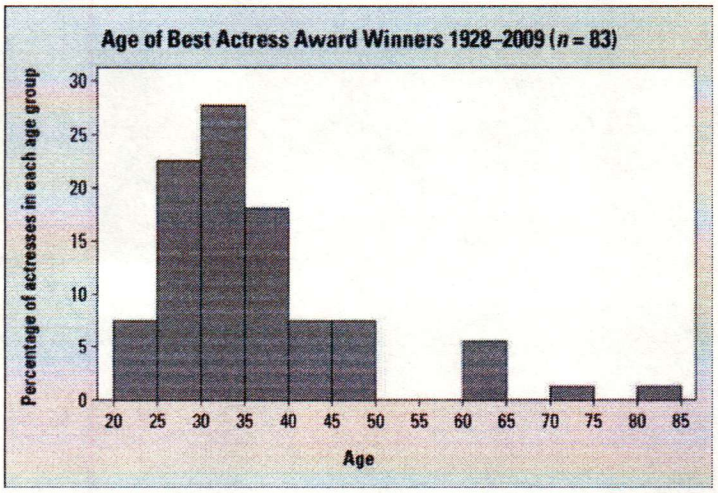
AGS 1 Name: _____ Period: _____ Date: _____

Notes 4.4 – Statistics

Warmup

1. Describe the data distribution of the histogram.



unimodal
skewed right
outlier: 80-85
high variability, because 20-85 covers most possible ages

2. Create a two-way relative frequency table from the given two-way frequency table.

Data

	Cats	Dogs	Total
Boys	5	10	15
Girls	7	8	15
Total	12	18	30

Frequencies

	Cats	Dogs	Total
Boys	16.7%	33.3%	50%
Girls	23.3%	26.7%	50%
Total	40%	60%	100%

Lesson

Word	Meaning/Notation	Example
Conditional Frequency	The percent something happens when we look at only one variable	The percent of people who like dogs, given those people are girls.

Rachel is still trying to convince her mom that texting 100 times a day is not excessive. So, she decides to put the data in a two-way frequency table.

	Average is more than 100 texts sent per day	Average is less than 100 texts sent per day	Total
% of Teenagers	**20** 42%	**4** 8%	**24** 50%
% of Adults	**2** 4%	**22** 46%	**24** 50%
% of Total	**22** 46%	**26** 54%	**48** 100%

Make two observations about the data in the table.

- Specific info
-

After further research, Rachel discovered that only 43% of people with phones send over 100 texts per day. Why do you think that data is so different from the data she and her mom collected?

- ages surveyed
- location of survey
- human error
- Sample size

Rachel realized that there were more ways to look at the data, if she focused on one variable it could make the data back up her case.

There are three ways to look at the data in a two-way table:

a. Relative frequency – percent of the grand total
b. Conditional frequency of rows – percent of the row total
c. Conditional frequency of columns – percent of the column total.

Since Rachel wants to focus on her texting habits with those of her peers, she decided to look at the row data for teens.

Row →

	Average is more than 100 texts sent per day	Average is less than 100 texts sent per day	Total
Teenager % of teenagers	20 83.3%	4 16.7%	24 100%
% of Adults	**2** 8%	**22** 92%	**24** 100%
% of People	**22** 46%	**26** 54%	**48** 100%

Make two observations about the data in the table.

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What argument could Rachel making using the conditional frequency of rows data from the above table?

Refer back to the data

Rachel wanted to see if the conditional frequency of columns data would help prove her point. So, she made the table below.

	Average is more than 100 texts sent per day	Average is less than 100 texts sent per day	Total
Teenagers	20/22 **20** 91%	**4** 15%	**24** 50%
Adults	2/22 **2** 9%	**22** 85%	**24** 50%
Total	**22** 100%	**26** 100%	**48** 100%

Make two observations about the data in the table.

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Be specific

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We can make conditional statement from row or column frequencies.
An example of a conditional statement:

Of those that average more than 100 texts per day, 9% are adults.

Write two conditional statements, one each for row and column, from the above tables.

C: a. Of those that average less than 100 texts, 15% are teens

R: b. Of the adults surveyed, 8% text more than 100 times/day.