

## Math 1

- Get toolkits + glue sticks + colored pencils/markers
- Take out parent contact form

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- Think: Average

To find the mean:

1. Add all values
2. Divide by the number of values.

- Think: middle

To find the median:

1. Put numbers in order from least to greatest.
2. Mark off high and low values until you reach the middle.
3. If there are 2 middles, add them and divide by 2.

Example Problem:

Find the Mean of the numbers.

83, 86, 91, 92, 94, 99, 99, 100

$$\frac{83+86+91+92+94+99+99+100}{8} =$$

$$= \frac{744}{8} = \boxed{93}$$

Example Problem:

Find the Median of the numbers

~~83~~, ~~86~~, ~~91~~, 92, 94, ~~99~~, ~~99~~, ~~100~~

$$\frac{92+94}{2} = \frac{186}{2} = \boxed{93}$$

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- Think: Most
- To find the mode:
1. Put numbers in order from least to greatest.
  2. Find the number that appears the most
  3. There may be more than one mode, or there may be no mode

Example Problem

Find the Mode of the numbers.

83, 86, 91, 92, 94, 99, 99, 100

99

- Think: Difference
- To find the range:
1. Put numbers in order from least to greatest.
  2. Subtract the lowest number from the highest number.

Example Problem

Find the Range of the numbers.

$100 - 83 =$ 17



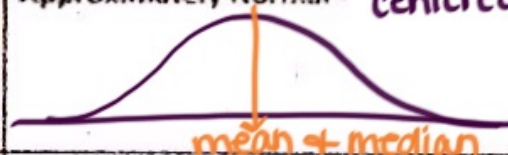
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# Shapes of Distributions and Histograms

## Vocabulary

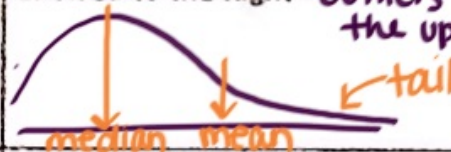
**Histogram** - A graphical display where data is graphed into ranges & then plotted as bars.

**Approximately Normal** - centered, no outliers

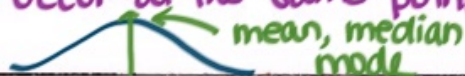


**Dot Plots** - A graphical display of data using dots.

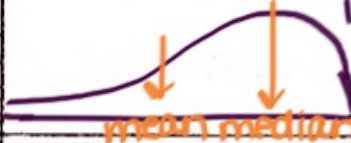
**Skewed to the Right** - outliers pull the mean to the upper part (right)



**Symmetric** - values occur at regular frequencies & the mean, median & mode occur at the same point



**Skewed to the Left** - outlier pulls mean to lower part (left)



**Range** -

Difference  
Max-Min.

**Relative Frequency** - %

How often something happens  
All outcomes

**Frequency** -

the amount of times something happens

**Outliers** -

A value that lies outside the bulk of other values in the data set



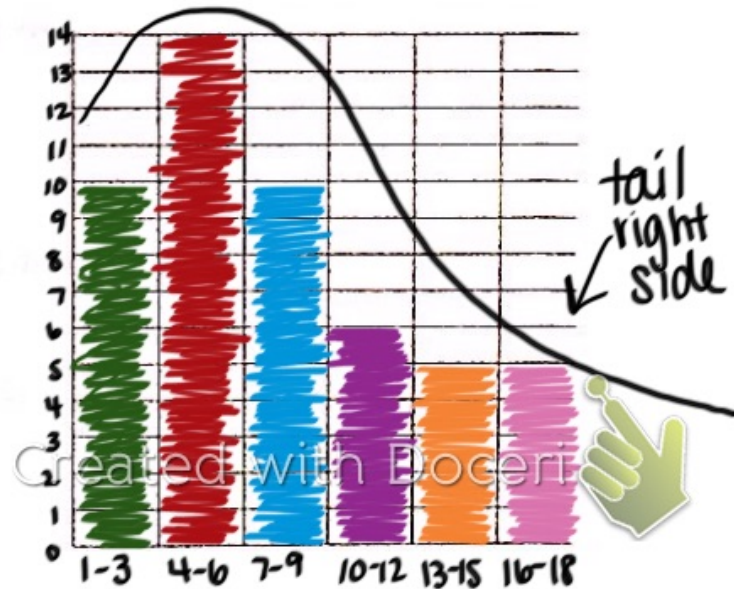


A manager at K-Mart is interested in the distance K-Mart employees travel to work each day. She asks each employee how many kilometers the store is from his or her home and received the following answers:



In order to organize this data, complete the following frequency distribution and construct a histogram for this data:

Kilometres	Frequency
1 - 3	10
4 - 6	14
7 - 9	10
10 - 12	6
13 - 15	5
16 - 18	5
Total	50



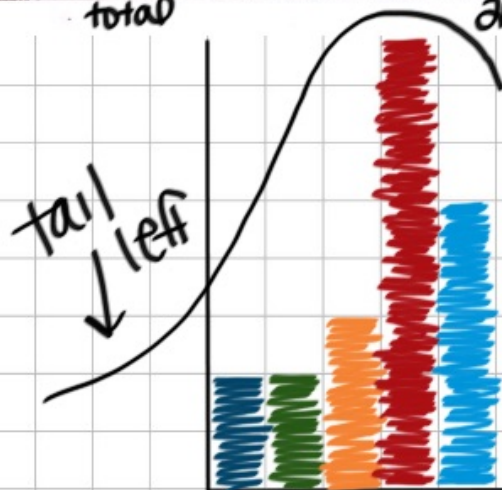
Distribution is skewed right.

The following is a list of test scores from a 10<sup>th</sup> grade math class

83    92    75    83    89    83    75    92    64    53  
 53    81    90    92    67    83    72    81    92    83

Make a frequency table of the data

Test Score	Frequency	Relative Frequency
50-59	2	$2/20 = .1$ or 10%
60-69	2	$2/20 = .1$ or 10%
70-79	3	$3/20 = .15$ or 15%
80-89	8	$8/20 = .4$ or 40%
90-99	5	$5/20 = .25$ or 25%
<b>total</b>	<b>20</b>	



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Describe the shape of the distribution

Skewed left

Find the relative frequency of the score 75

$$\frac{2}{20} = 10\%$$

Find the relative frequency of the score 92

$$\frac{4}{20} = 20\%$$

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Twenty five applicants to the Canadian Army are given a blood test to determine their blood type. The data set is:

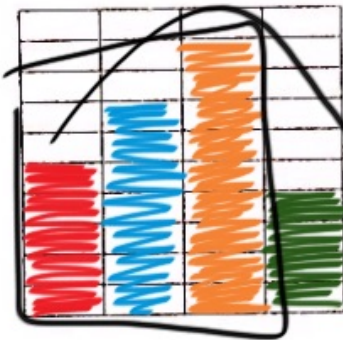
A B B AB O  
 O O B AB B  
 B B O A O  
A O O O AB  
 AB A O B A

Shape?  
Skewed right.

Complete the following frequency distribution and construct a bar chart for this data.

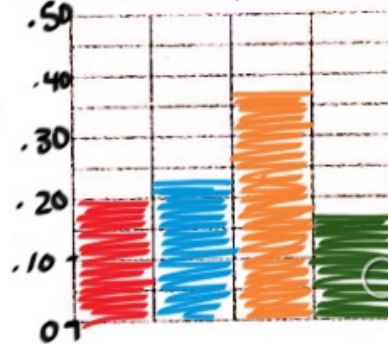
Blood Types	Frequency	Relative Frequency
A	5	$\frac{5}{25} = .2$
B	7	.28
O	9	.36
AB	4	.16
Total	25	1

Histogram



tail  
↓  
right

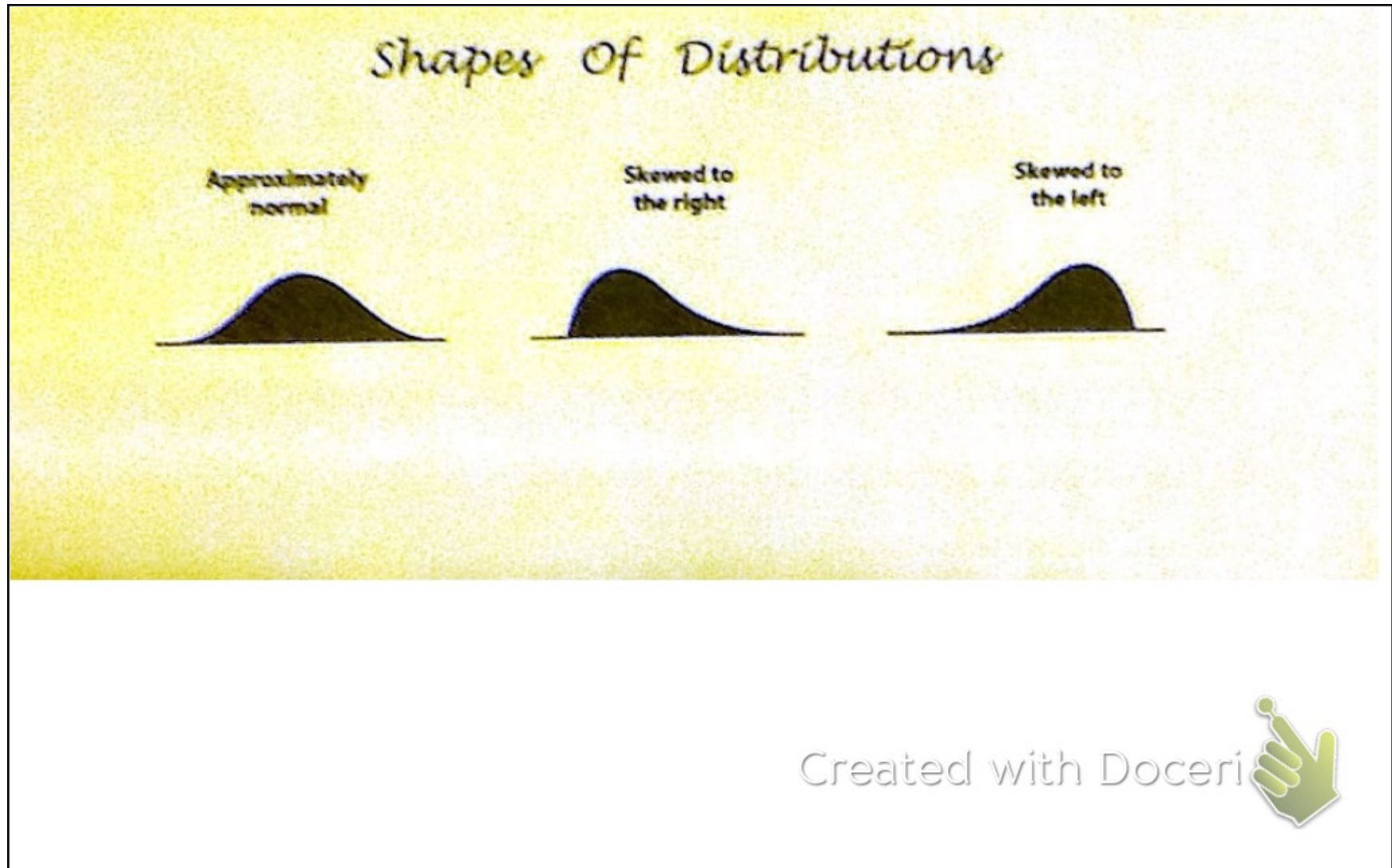
Relative Frequency Histogram



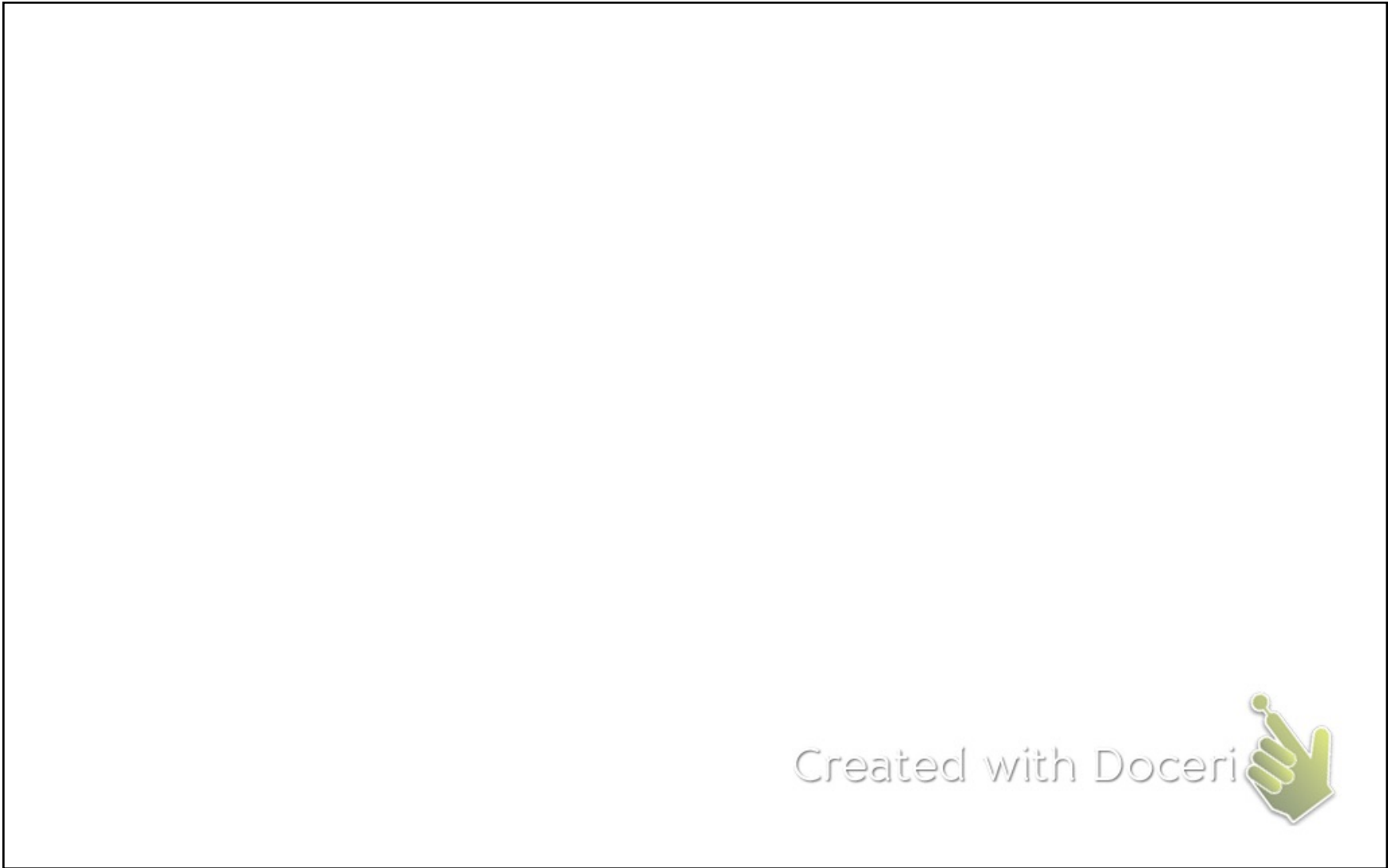
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