

Warm Up

1)

X	2	4	6	8	10	12
Y	5.01	6.98	9.72	13.53	18.84	26.24

Write the most appropriate regression equation:

$$y = 3.6(1.18)^x$$

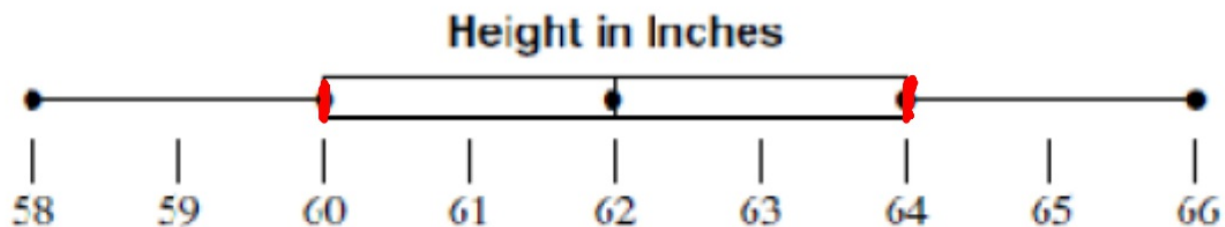
2)

X	1	5	7	11	16
Y	2.2	20.94	33.54	63.15	106.71

Write the power regression for the table:

$$y = 2.2x^{1.4}$$

3) Make a paper airplane. Yes... Really.



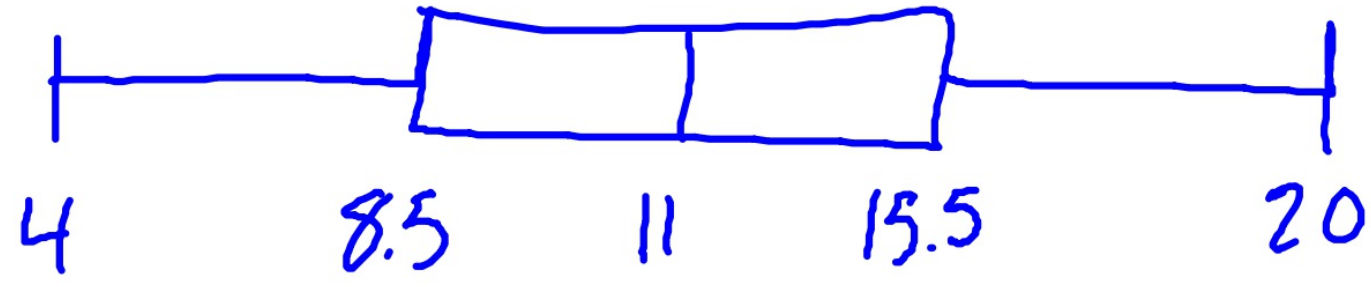
- 1) What is the median? 62
- 2) What is the lower quartile? 60
- 3) What is the upper quartile? 64
- 4) What is the minimum? 58
- 5) What is the maximum? 66
- 6) The 5 values above are called the 5 Number Summary
- 7) What is the range? 8
- 8) What is the IQR? 4 64-60 ↗
- 9) What % of the data is below 64? 75%
- 10) What % of the data is between 60 and 62? 25%
- 11) What % of the data is above 62? 50%
- 12) What is the mean?

Given the points per game for a player:

12, 15, 9, 5, 17, 16, 10, 11, 4, 8, 9, 20, 12

13) Find the 5 number summary _____

14) Create a Box Plot:

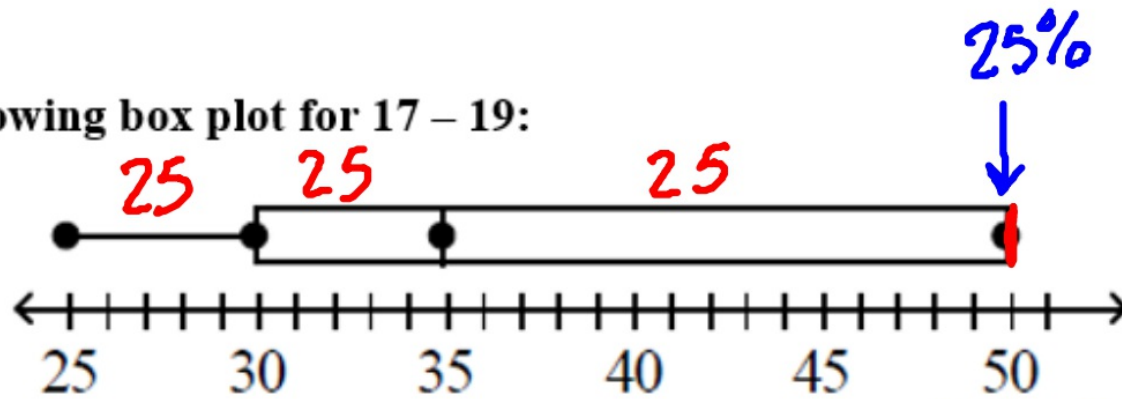


15) Find the 3 measures of center: Mean: 11.385 Median: 11 Mode: 12
9+12

16) Find the 3 measures of spread: Range: 16 IQR: 7 S.D.: 4.481

σ_x :
n:

Use the following box plot for 17 – 19:



17) What is the 5 number summary for the above plot?

25, 30, 35, 50, 50

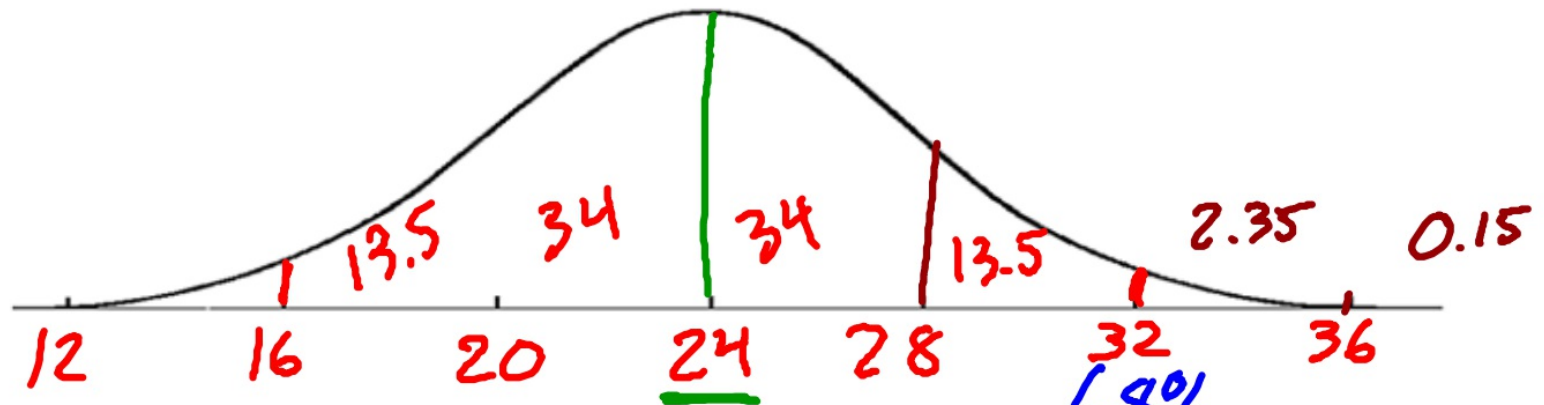
18) What % of data is above 35?

50%

19) What % of data is below 50?

100%

7) 500 juniors at Central HS took the ACT last year. The scores were distributed normally with a mean of 24 and a standard deviation of 4. Label the mean and 3 standard deviations from the mean below:



a. What percent of scores are between 20 and 28? 68%

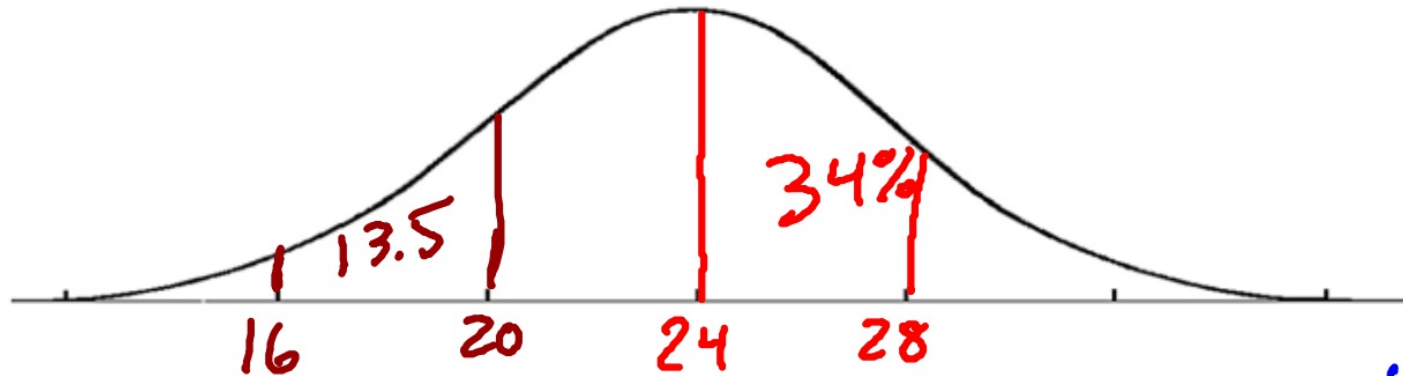
b. What percent of scores are between 16 and 32? 95%

c. What percent of scores are between 16 and 28? 81.5%

d. What percent of scores are less than a 12? 0.15%

e. What percent of scores are greater than a 24? 50%

7) **500** juniors at Central HS took the ACT last year. The scores were distributed normally with a mean of 24 and a standard deviation of 4. Label the mean and 3 standard deviations from the mean below:



f. Approximately how many juniors scored between 24 and 28?

$$0.34(500) =$$

170

g. Approximately how many juniors scored between 20 and 28?

340

h. Approximately how many juniors scored between 24 and 32?

237 / 238

i. Approximately how many juniors scored between 16 and 20?

$$0.135(500) = 67.5$$

67 / 68

j. Approximately how many juniors scored higher than 32?

12 / 13

Statistics

Review & TASK

6 Basic Measures

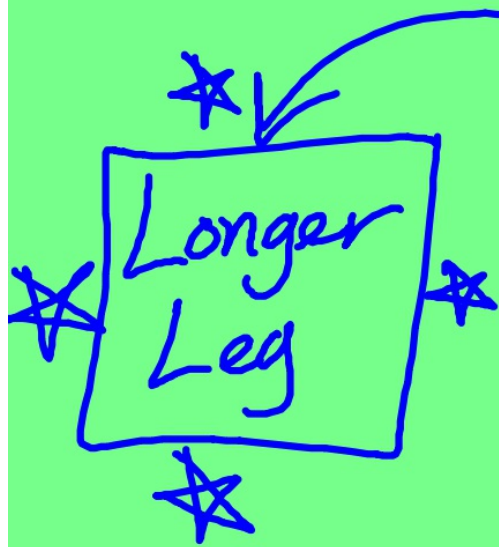
5 Number Summary

Box Plots

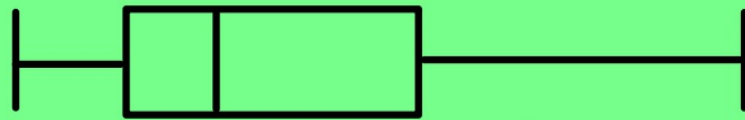
Normal Distributions

Regressions

Skewed



Symmetric
Mean \approx Med



Skewed Right
Mean $>$ Med



Skewed Left
Mean $<$ Med

Test Tomorrow:

- Regression**
- 6 Basic Stats**
- Box Plots**
- Normal Distribution**
- Some Review**

Regression:

- **Stat > Edit > Input in L₁ & L₂**
- **2nd y = (Stat Plot) > Turn On**
- **Zoom 9 "Stat"**
- **Determine the Type of Reg.**
- **Stat > Calc > Match Reg. Type**

6 Basic Stats

- Stat > Edit > Input in L₁**
- Stat > Calc > 1 Var-Stat**
- Know each part in the list**

Know what outliers affect.

Know how to determine outliers.

What measure for making an arguement.

What measure best represents a data set.

Box Plots:

- 5 Number Summary**
- Create and Label a Box Plot**
- Know % questions**
- How many questions**
- Compare two plots**

Normal Distribution:

- Mean in the middle**
- Add / Subtract the S.D.**
- Know the % for each section**

Statistics

A Brief Review of Histograms

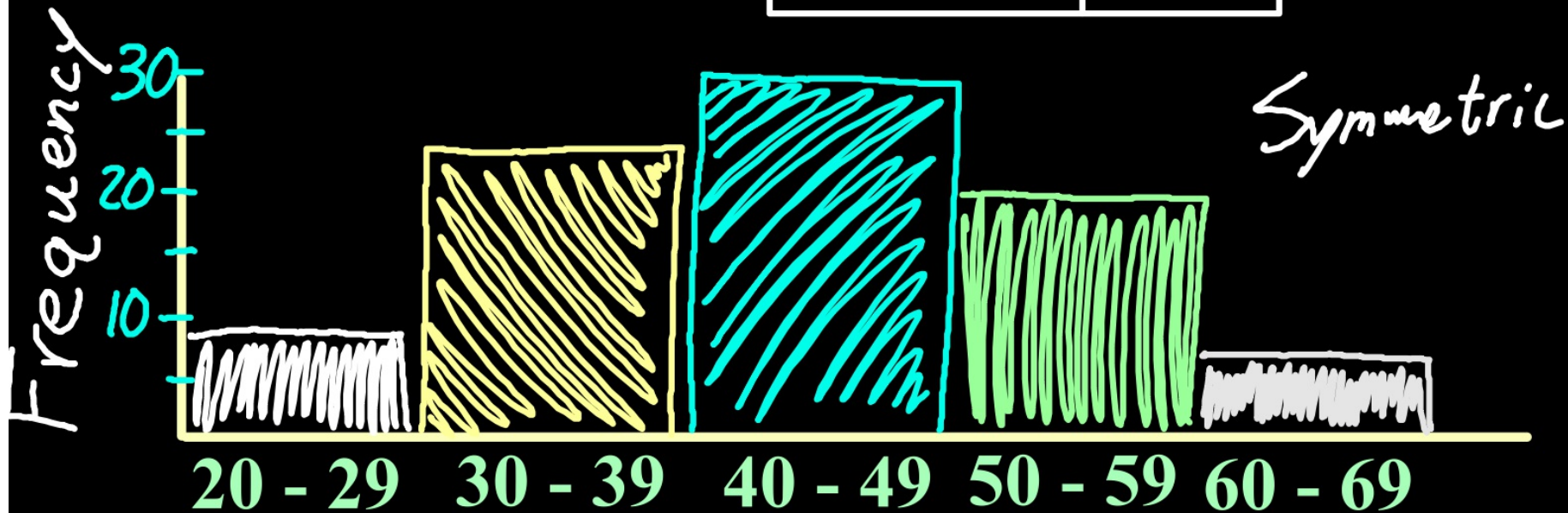
****You need to make histograms
on Today's TASK****

A histogram is a visual representation of a frequency table.

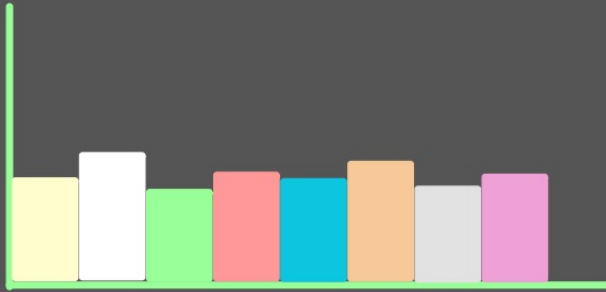
They are a type of bar graph.

Frequency Table for ages of individuals at a company.

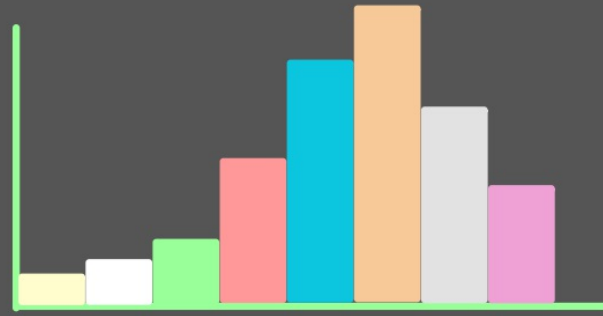
20 - 29	8
30 - 39	24
40 - 49	28
50 - 59 </td <td>18</td>	18
60 - 69	6



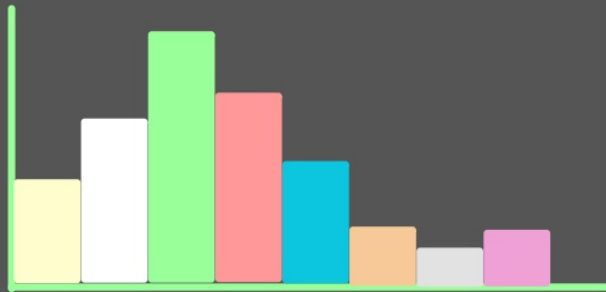
Skew on Histograms



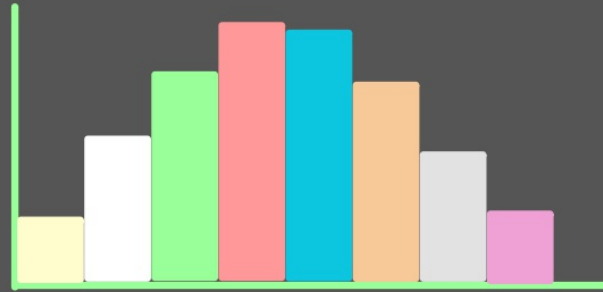
Uniform



Skewed Left



Skewed Right



Symmetric



Statistics TASK

**This counts the same as
a test grade!!!**

**This activity will be counted as
a TEST grade! Due Next
FRIDAY**

**Take your time going through
these questions...**

Again... TEST Grade

On the histograms...

The x-axis is already labeled for you.

All you need to do is label the y-axis and fill in the appropriate bars for the frequency within each interval. If you have questions ASK!!!

The *quality* of your work is the biggest determination on your grade.

Shooter	Airplane Dist. (in # of tiles)	Shooter	Shots Made	Total Shots	Shot %	Sum of die rolls		
Shooter A	1st	A						
	2nd	B						
Shooter B	1st	C						
	2nd	D						
Shooter C	1st	E						
	2nd	F						

Shooter D	1st							
	2nd							
Shooter E	1st							
	2nd							
Shooter F	1st							

3) Make a histogram for the distances of the paper airplanes:

Frequency

0-4 5-8 9-12 13-16 17-20 20 +

Assignment:

WB 608

**The best review will be looking
over the quizzes**

**The page after WB 608 is EC on
your test due Monday, it will be
collected and checked for accuracy**

1) Two sides of a triangle are 12 and 18 with an angle of 46° between them. What is the measure of the 3rd side?

$$d^2 = 12^2 + 18^2 - 2(12)(18)\cos 46 \quad \sqrt{\text{Ans}}$$

2) How many ways could 5 players be picked from a group of 8 friends?

$${}^8C_5 \quad (\text{no order})$$

3) A spinner has 5 equal sections. What is the probability of landing on the same section 3 times in a row?

$$\frac{1}{5} \cdot \frac{1}{5} \cdot \frac{1}{5} =$$

4) A Ferris wheel has a diameter of 60 feet, a center axle 35 feet off the ground and takes 4 min to rotate. Write an equation to model the Ferris wheel.

$$y = -30\cos\left(\frac{\pi x}{2}\right) + 35$$