

EXAM REVIEW 1st Semester

Unit 1: One Variable Statistics

Name:

Hour:

Vocabulary:

- Numerical Statistical Question
- Categorical Data Statistical Question
- Non-Statistical Question

Know how to make:

- Dot plot
- Histogram (Frequency Table)
- Find 5 number summary
- Box Plot (5 number summary)

Hints:

- Put data in numerical order if it isn't done already.
- Make a frequency table
- Include labels

Problem Set:

Use the data set to represent the number of errors on a typing test: 3, 5, 6, 8, 10, 8, 8, 9, 10, 10, 9

1. Create a box plot:

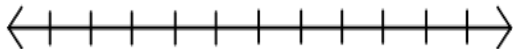
Min:

Q_1 :

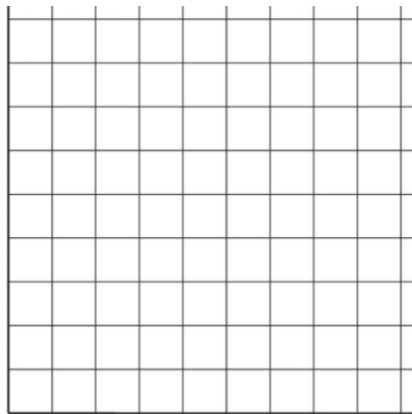
Med:

Q_3 :

Max:

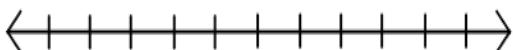


2. Create a histogram:



# of errors	Frequency
0-2	
2-4	
4-6	
6-8	
8-10	
10-12	

3. Create a Dot Plot



Vocabulary: Draw an example of

Skewed to the right:

Skewed to the left:

Bimodal:

Uniform:

Bell - Shaped:

Describe what a Symmetric graph would like look:

- When figuring out the center of a graph, when do you use the mean?
- When figuring out the center of a graph, when do you use the median?

Problem Set:

4. Draw a dot plot with at least 8 data points such that:

a. mean = median

b. Mean > median

c. mean < median

5. Draw a box and whiskers plot such that:

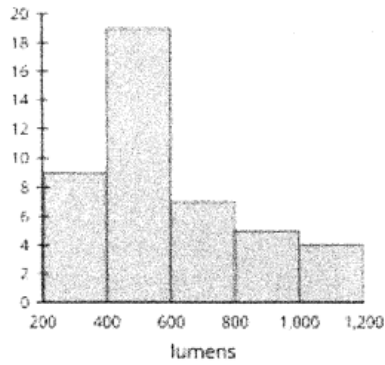
a. mean = median

b. Mean > median

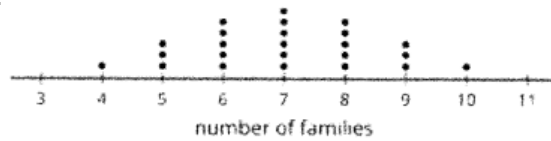
c. mean < median

6. Describe the shape of the following graphs:

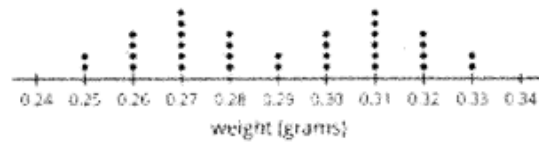
a.



b.



c.



COMPARING AND CONTRASTING DATA DISTRIBUTIONS (Draw box plots)

Draw a graph that has high variability

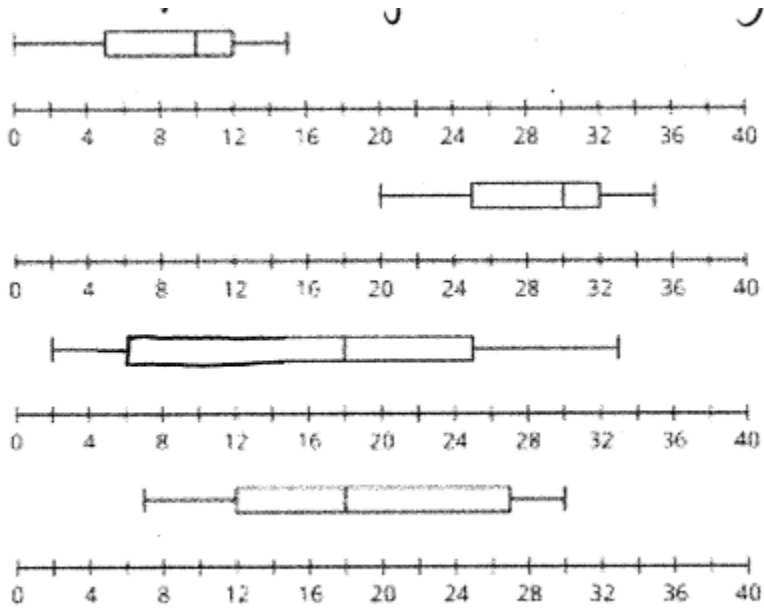
Draw a graph that has medium variability.

Draw a graph that has low variability

What does variability mean in a graph?

Problem set:

7: Number the box plots from the greatest variability to the least variability:



STANDARD DEVIATION (Draw dot plots)

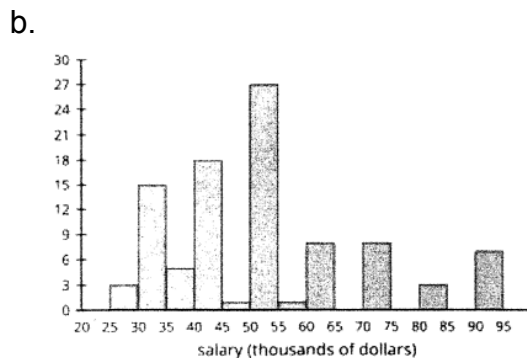
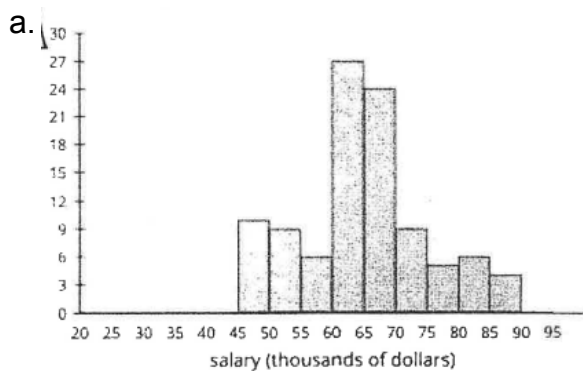
Draw a graph that has a SMALL standard deviation.
(Explain why)

Draw a graph that has a BIG standard deviation
(Explain why)

Draw a graph with a standard deviation of 0. (Explain why)

Problem Set:

8: Which graph has a higher standard deviation and why?



OUTLIERS

How to calculate outliers given a set of data?

When do you include an outlier in a set of data? When do you take out an outlier from a set of data?

Problem Set:

9: Calculate if there are any outliers in the following data set (SHOW ALL WORK!)

6 6 7 8 8 8 9 10
10 12 13 14 15 16 30