Lesson 11.5 Extra Practice: *Appropriate Measures (Monday May 4ᵗʰ)*

<u>Helpful Youtube Links</u>

<u>Steps to Solve:</u>

1. Take the data set an arrange them from **<u>least</u>** to **<u>greatest</u>**.

2. Determine which approach makes the most sense based on this data given. Use the chart below to help you determine which one to use.

Measure of Center	Use it when ….
Mean	• The numbers in the data set are fairly close in value and do **<u>not</u>** include an outlier (or an extreme value) Ex: {2, 4, 6, 8}
Median	• The numbers in the data set includes one or more outliers. Ex: {2, 4, 6, <u>13</u>} outlier:13 **13 is seven more than the second highest digit, 6. This gap in values could skew the measure of center.
Mode	• The numbers in the data set often repeat (4 or more times) Ex: {2, 2, 2, 2, 4, 6, 6}

3. Solve using the appropriate measure of center

Lesson 12.1 Extra Practice: *Line Plots (Tuesday May 5th)*

Helpful Youtube Links

https://youtu.be/AtiOjlyOQf4

Vocabulary

Line Plot or Dot Plot – a visual display of how data is represented and compares from smallest to largest value, also known as, distribution. Each data value is shown as a <u>dot</u> or other mark, typically an X, above a number line.
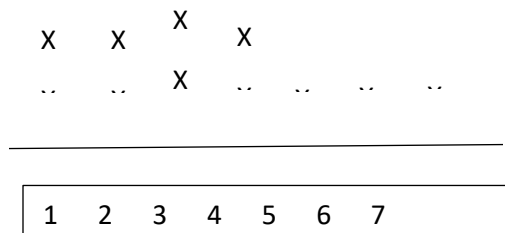
Steps to creating a Line Plot or Dot Plot: see page 864 in your book as well 😊

Step 1:
Create a number line that accounts for the range of your data. Meaning if you have values like:
1,2,2,1,4,6,4,3,7,3,3,5…. Your number line will range from 1 to 7 and include all the integers in between.

Step 2:
Place as many Xs above each number as there are responses for that number. Psst…Do NOT forget to title your diagram.

```
                X
    X     X          X
    ..    ..    X    ..    ..    ..    ..
    _____
    | 1    2    3    4    5    6    7 |
    |_____|
```

Step 3:
Describe the data. What do you notice? For example: How many X's in total? Where are there more? Less? What does this mean in regard to the word problem/scenario. See the section below on how to analyze.

Steps to ANALYZING a Line Plot or Dot Plot: see page 865 in your book as well 😊

This means you can describe a set of data by finding the mean, median, mode, range, and any outliers.

Step 1: Find the median

List the values from the dot plot from least to greatest OR check off the X's from the outside to the inside to find the median (the MIDDLE value). *What does that number mean in regards to the word problem?*

Step 2: Find the mode

What number has the most X's? *What does that mean in regards to the word problem?*

Step 3: Find the range

Subtract the largest and smallest values. *What does that mean in regards to the word problem?*

Step 4: Find the outlier

There won't always be an outlier. You can check if there is one just like you did in lesson 11.3. *What does that mean in regard to the word problem?*

Steps to find outliers:

1. Find the IQR
   a. Let's use the IQR, **4,** from the previous example.
2. Multiply the IQR by 1.5.
   a. 4 x 1.5 = **6**
3. Subtract 6 from Quartile 1 AND add 6 to Quartile 3. This gives you the limits to determine if any of the values are an outlier. Meaning the value falls too low or too high in comparison to the other values.
   a. Q1=3…so….3-6 =**-3**
   b. Q3=7…so… 7 +6= **13**
4. CONCLUSION: all the values from the previous example, **0, 1, 3, 5, 5, 6, 7, 7, 9, 12** , fall between -3 and 13… so there are **NO** outliers for this example

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Lesson 12.2 Extra Practice: *Histograms (Wednesday May 6th)*

Helpful Youtube Links

https://learnzillion.com/lesson_plans/7244-create-a-histogram/

https://www.youtube.com/watch?v=5IPJjUOqnoA

Step 1:
Organize the given data into a frequency table:

Ex.) 1, 1, 1, 2, 2, 3, 3, 3, 3, 4, 4, 4, 5

1	III
2	II
3	IIII
4	III
5	I
6	III

Step 2:
Create even intervals (Choosing Bins)
Ex) 1 – 3
    4 – 6

Step 3:
Use the frequency amount to graph the data into a histogram.