Enrichment Packet #26

Due: Monday

NAME: _____

State Predictions

John and Jessica are assigned to collect data for a school project. They need to find out which of 4 U.S. states the students would like to learn more about: Florida, California, Oregon, or Colorado.

Data

It is impossible to ask all of the 500 students at their school, so they decided to collect some sample data.

• John surveyed 10 students: 7 chose California and 3 chose Florida.

• Jessica surveyed 50 students: 25 chose California, 10 chose Florida, 10 chose Oregon, and 5 chose Colorado.

1. Using John's data, predict the number of students who would choose to know more about each state.

_____

_____

2. Using Jessica's data, predict the number of students who would choose to know more about each state.

_____

_____

3. Which survey do you think is a more accurate prediction of the students' choices? Why?

_____

_____

4. What things might influence the predictions when taking a sample?

_____

_____
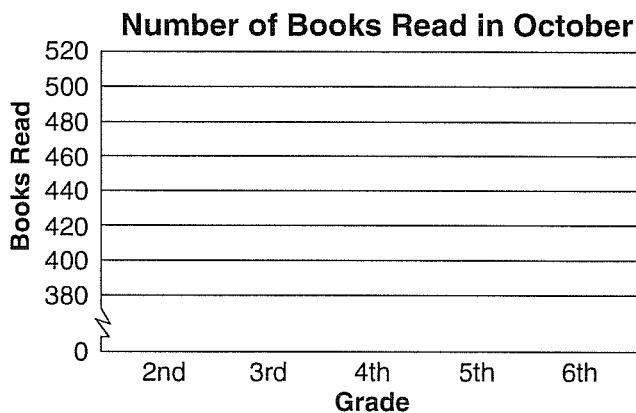
_____

Graphing True or False

Washington Elementary School kept a record of the number of books read by each grade in October. Gwen is using the data in the table to make a bar graph. Tell whether each statement is *True* or *False*.

Data

Grade	2nd	3rd	4th	5th	6th
Books Read	395	419	461	443	511

1. Gwen's graph will have 5 bars.   _____

2. The bar for 3rd grade will be twice as tall as the bar
   for 2nd grade.   _____

3. The bar for each grade will have a greater length than
   the bar for the grade before.   _____

4. The 6th grade bar will have the greatest length.   _____

5. The title of Gwen's graph should be "Number of Books
   Read in November."   _____

6. A good scale for Gwen's graph is 20.   _____

7. Complete the bar graph using the data in the table.

Number of Books Read in October

Books Read

520
500
480
460
440
420
400
380
0

2nd   3rd   4th   5th   6th
Grade

Life of a Hamster

```
                        X
                        X
               X        X        X
               X        X        X
      X        X        X        X
      X        X        X        X        X
      X        X        X        X        X
      X        X        X        X        X
X     X        X        X        X        X
+-----+--------+--------+--------+--------+---->
15    18       21       24       27       30
```

Hamsters' Lifespans (Months)

1. What does this line plot show? _____

2. Based on the line plot, would you say most hamsters live to 30 months?

Explain. _____

_____

3. a. If two hamsters that lived 21 months each were added to the data,

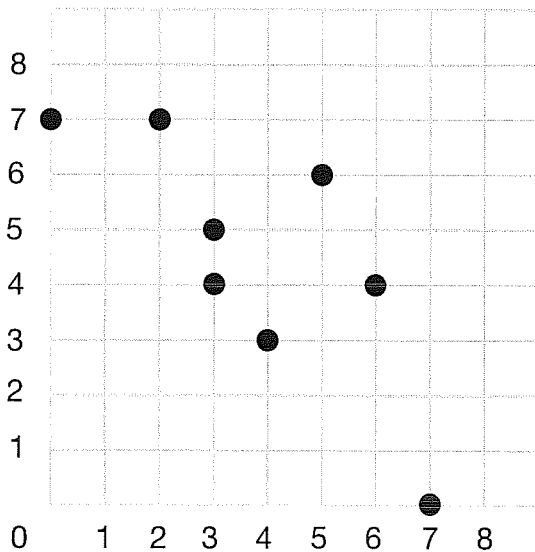how would you change the line plot? _____

_____

b. How would your answer in 3a change your answer to how long
hamsters live?

_____

4. Write a question that can be answered by the line plot, and give the answer.

_____

_____

5. Is there an outlier for this data? Explain.

_____

Treasure Hunt

Join the treasure hunt. Label the point for each clue. Then write   **Mental Math**
the ordered pair found at the point where the treasure is hidden.

This way to the treasure!

1. Point *A* is Mystery Rock, located at (0, 7).

2. Point *B*, Chilly Cave, is located at (2, 7).

3. At point *C*, (5, 6), strange footprints were found.

4. At (3, 5), Point *D*, is the entrance to the woods.

5. There is a torn flag at Point *E*, (6, 4).

6. Someone dropped a gold coin at Point *F*, (4, 3).

7. At Point *G*, (3, 4), there are rusty tools.

8. The treasure is hidden at Point *H*. Where is Point *H*? _____

Cricket Weather!

Did you know that you can tell the temperature by counting a cricket's chirps? The table shows the number of chirps a cricket makes each minute at different temperatures. Use the data in the table to make a line graph.

Data

Number of Chirps	Temperature
40	50°F
60	55°F
80	60°F
100	65°F
120	70°F

1. Label the vertical axis "Temperature." Let each line stand for 5°F. Starting with 50°F and ending with 75°F, number the vertical lines of the graph.

_____

2. Label the horizontal axis "Number of chirps." Let each line stand for 20 chirps. Starting with 20 and ending with 140, number the horizontal lines of the graph.

_____

3. Use dots to show the data on the graph. Use a ruler to connect the dots. Give the graph a title.

_____

4. Use your ruler to extend the line on the graph so that it crosses the vertical line labeled 140. What should the temperature be if a cricket chirps 140 times?

_____

Stamps for Sale

The Stamp Store buys and sells stamps for collectors.
Some stamps and their prices are shown.

Reasoning

$1.56 $3.22 $0.68 $2.15 $4.12 $1.53 $1.19 $1.85

Write the amount of change each buyer gets.

1. Jon buys [stamp] and [stamp] giving the clerk $5.00. _____

2. Ann buys [stamp] and [stamp] giving the clerk $6.00. _____

3. Ann buys [stamp] and [stamp] and [stamp] giving the clerk $10.00.

_____

4. Jon buys [stamp] and [stamp] and [stamp] and [stamp] giving the clerk

$10.00. _____

5. John gives the clerk $4.00 for 2 stamps and gets no change.

Write the prices of the stamps. _____

Dazzling Data

Choose a number from the box to make each sentence true. Write
the number on the line. Use each number exactly once.

Data

5	7	28	17	6	55	8	22	14	4

1. The mode is 7.   3, 4, 5, 6, 7,   _____

2. The range is 7.   1, 3, 4, 7,   _____

3. The mode is 22.   3, 4, 8, 18, 22, 24,   _____

4. The median is 17.   5, 10, 20, 18,   _____

5. The range is 12.   2, 4, 6, 8, 10, 12,   _____

6. The mode is 6.   5, 6, 6, 18, 3, 2, 2,   _____

7. The range is 50.   5, 15, 10, 8, 30,   _____

8. There is no mode.   5, 7, 17, 6, 4,   _____

9. The median is 4.   2, 3, 4, 5,   _____

10. The median is 10.   10, 2, 12, 15,   _____

Score!

The table shows the top nine scorers in a basketball tournament.
Use the data from the chart to make stem-and-leaf plots.

Data

Player	1-pt. free throws	2-pt. baskets	3-pt. baskets	Total points
1	29	53	12	171
2	27	47	16	169
3	20	40	21	163
4	19	37	22	159
5	18	41	18	154
6	22	37	18	150
7	9	43	17	146
8	12	31	23	143
9	7	55	8	141

1. Make a stem-and-leaf plot showing the number of free throws made by the high scorers. Circle the median.

Stem	Leaf

2. What is the range of the number of total points scored? _____

3. Make a stem-and-leaf plot showing the number of 2-point baskets made. Circle the median.

Stem	Leaf

4. Make a stem-and-leaf plot showing the number of 3-point baskets made. Circle the median.

Stem	Leaf

Name _____

Relating Circles

The chart below provides a few pieces of information: **Data**

Name	Gender	Favorite Color	Favorite Sport
José	Male	Red	Soccer
Rosemary	Female	Green	Baseball
Caroline	Female	Green	Baseball
Sam	Male	Red	Basketball
Andrew	Male	Green	Basketball
Rebecca	Female	Blue	Basketball

Use the chart to answer the following questions. Make sure to
include all the fractions in your answers:

1. Create a circle graph which shows which fraction of the
    people are male and which are female.

2. Create a circle graph which shows which fraction of the
    people like the color red, which like the color green, and
    which like the color blue.

Name _____

Mystery Machines

Figure out the mystery in each machine below. A number goes in and another number goes out. Find what happens to the number in the machine. Write down each pattern. Then fill in the blank boxes.

Reasoning

1.

128	64	16	30	50	22

64	32	8			

2.

1	4	3	8	6	10

48	51	50			