Statistical Reasoning
Displaying Data Extra Practice

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_

States sell lots of lottery tickets. The table below shows where the money comes from.

1. Make a bar graph that shows the distribution of lottery sales by type of game.

State Lottery Sales by Type of Game, 2007

**Game Sales (millions of dollars)**

Instant Games 29,736
Three-digit games 5,586
Four-digit games 3,499
Lotto 10,014
Other games 3,579

Total 52,414
*Source: 2009 Statistical Abstract of the United States*

1. Can you construct a pie chart of this data? If so, use the circle below to create the pie chart.

***For #3 – 11: Use the following information: At one particular Virginia high school, the math department consists of 20 teachers. Their ages are as follows:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **54** | **58** | **60** | **43** | **35** | **32** | **47** | **28** | **33** | **42** | **65** | **73** | **44** | **27** | **32** | **35** | **28** | **25** | **48** | **33** |

3. Construct a dotplot for the data. 4. Construct a stemplot for the data.



5. Complete the frequency table below and construct the corresponding histogram.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Class | Count |  |   |   |
| 25 to < 34 |  |
| 34 to < 43 |  |
|  |  |
|  |  |
|  |  |
|  |  |
|   |

6. Describe the shape, center, and spread of the histogram. (Hint: Use our vocabulary and your prior knowledge)

7. Do there appear to be any obvious outliers? If so, name them.

8. What is the width of each class in the histogram?

9. Could this data set be represented by a pie graph? Why or why not?

***For #10 – 13: Use the following information: A teacher surveyed a group of 36 Statistic students as to the number of hours of sleep each had received the previous night. Here were the hours given:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 6 | 10 | 8 | 6 | 7 | 11 | 7.5 | 6 | 9 | 7.1 | 7 | 5.9 | 7 | 8 | 7 | 7.5 | 7.5 |
| 4 | 9 | 8 | 7.2 | 6 | 4 | 6.5 | 5 | 8 | 8 | 7 | 8 | 7 | 8 | 5.1 | 5 | 3 | 6 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 10. | Complete the following frequency distribution table.  |  |  | 11. Construct the corresponding histogram. |
|  |  |
| Class | Count |  |
| 3.0 to < 4.2 |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |   |
|  |  |  |  |  |