Statistical Reasoning Name:

**Minute to Win It! – Face the Cookie**

Directions:

1. Get a partner **(you may only work in pairs!)**
2. You will be given 3 Oreo cookies – DO NOT EAT THEM YET!
3. Playing the game:
   1. One partner is the timer…..the other partner plays the game.
   2. Trying to get the Oreo in your mouth. The catch -You cannot touch the Oreo – in true “Minute to Win It” fashion. Place ONE Oreo on your forehead and your hands behind your back. When your partner is ready to time you, you must move your face to get the Oreo to your mouth. If it falls, catch it, and start over. Stop the timer when the Oreo is in your mouth.
   3. Repeat this process two more times.
4. Record your three times (in seconds) on the board at the front of the room
5. Switch “jobs” with your partner – If you ate Oreo’s the first round, you are now the timer and vice versa. Record your 3 observations.
6. Each student in the class has a space for three observations; record the three times (in seconds) for all students on the sheet provided.

Data for the entire class:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

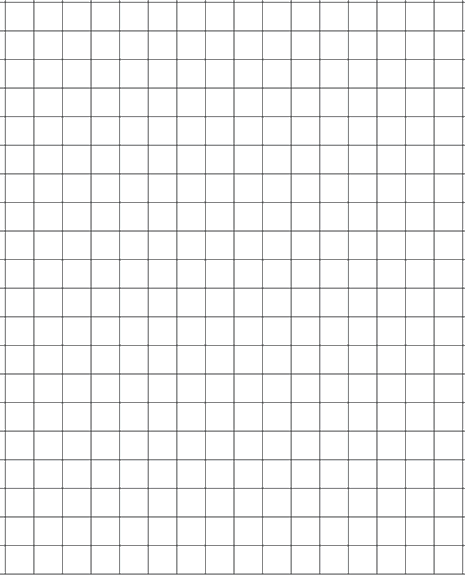
Feel free to use a calculator for the following questions:

1. Make a dot plot of the class data. (this will help answer the next questions).



1. Find the range using the data for the entire class.
2. Find the median using the data for the entire class.
3. Find Q1 and Q3 using the data for the entire class.
4. Are there any outliers? Show your work algebraically.

1. Using intervals of 10 seconds, make a histogram using the data for the entire class on the following template (coordinate grid).



Using the data collected for the class, find the following:

\_\_\_\_\_ What is the percentile for 65 seconds?

\_\_\_\_\_ Find the 20th percentile

\_\_\_\_\_ Find the 30th percentile

\_\_\_\_\_ What is the percentile for 45 seconds?

\_\_\_\_\_ Find the 84th percentile

\_\_\_\_\_ Find the 46th percentile

What is the percentile for your shortest time? What is the z-score for your shortest time?

What is the percentile for you longest time? What is the z-score for your longest time?