**Z-Score Worksheet**

**10/8/14**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**(1) Write down the z-score formula.**

**(2) Calculate your own z-score relative to females in our class based on the following info. Show your work.**

n = 75

µ = 64

σ = 5

**(3) Calculate your own z-score relative to males in our class based on the following info. Show your work.**

n = 50

µ = 71

σ = 4

**(4) Calculate your own z-score relative to the whole class based on the following info. Show your work.**

n = 125

µ = 67

σ = 6

**(5) Did your z-score change? If so, why?**

**(6) Using the below z-distributions, indicate where your z-score approximately falls on each distribution.**

 (a) Females



(b) Males



(c) Whole class



**(7) Re-write your z-score on the line for each category. Turn to the z-score table at the back of this packet, find your z-score for each category (i.e., females, males, and whole class) under the column “z”. Then, record the corresponding values for “larger proportion” and “smaller proportion” for each z-score on the lines below. NOTE: This table is taken from Howell, pg 598-601.**

 (a) Female z-score = \_\_\_\_\_\_\_\_

 Larger Proportion = \_\_\_\_\_\_\_\_

 Smaller Proportion = \_\_\_\_\_\_\_\_

 (b) Male z-score = \_\_\_\_\_\_\_\_

 Larger Proportion = \_\_\_\_\_\_\_\_

 Smaller Proportion = \_\_\_\_\_\_\_\_

 (c) Whole class z-score = \_\_\_\_\_\_\_\_

 Larger Proportion = \_\_\_\_\_\_\_\_

 Smaller Proportion = \_\_\_\_\_\_\_\_

**(8) Complete the following statements.**

 **-If z-score is positive, multiple the “larger proportion” by 100 to get percentile.**

 **-If z-score is negative, multiply the “smaller proportion” by 100 to get percentile.**

 **-An easier way: look back to your z-score graph on Pg. 2 to help you choose the correct proportion.**

 (a) I am taller than \_\_\_\_\_\_\_\_ % of females in our class.

 (a) I am taller than \_\_\_\_\_\_\_\_ % of males in our class.

 (a) I am taller than \_\_\_\_\_\_\_\_ % of our whole class.