**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_**

**U14 CWK #3** *Comparing and Ordering Real Numbers*

**Directions:** Do **not** use a calculator for the following problems. Any calculations you may need are given in the problem.

1. Order the following numbers from **least to greatest**. Note that $8.5^{2}=72.25$.

$$\sqrt{80}, 8, 9, 8.5, \sqrt{62} $$

1. Order the following numbers from **greatest to least**. Note that $3.5^{2}=12.25$.

$$-\sqrt{13}, -3, -4, -3.5 $$

1. Put the following numbers in order from **least to greatest.** Use the following calculations to answer the questions below.

 $2.2^{2}=4.84$ $2.3^{2}=5.29 2.23^{2}=4.9729 2.24^{2}=5.0176$

* 1. $\sqrt{5} , \frac{5}{2}, 2.2, the side length of a square with an area of 4, $
	2. Write a number that would be between 2.2 and $\sqrt{5}$.
	3. Write an irrational number that is smaller than all of the numbers in part a.
1. Order the following numbers from **least to greatest.** Use the following calculations to answer the questions below.

$ 6.48^{2}=41.9904$ $6.5^{2}=42.25$

* 1. $\sqrt{50}, 6, 7, 6.5, \sqrt{42} $
	2. Write a rational number that is smaller than all of the numbers in part a.
	3. Write an irrational number that is smaller than all of the numbers in part a.
	4. Find a number between $\sqrt{42}$ and $6.5$.
1. Order the following numbers from **greatest to least** Use the following calculations to answer the questions below.

$ 2.44^{2}=5.9536$ $2.45^{2}=6.0025$ $2.449^{2}=5.997601$

a. $\sqrt{6}, 2.44, 2.\overbar{4}, 2.5, the side length of a square with an area of 9, $

1. Write an irrational number that is between 0 and the smallest number from part a.
2. Write a number that is between 2.44 and $\sqrt{6}$.
3. Use the approximations of π and the calculations given below to answer the questions below.

π is between 3 and 4

π is between 3.1 and 3.2 $3.15^{2}=9.9225$

π is between 3.14 and 3.15

π is between 3.141 and 3.142

1. Write a number that is between 3 and $π$.
2. Write a number that is between 3.14 and $π$.
3. Which is larger? Justify $ \left(π+5\right) or 8$
4. Which is larger? Justify $ \left(10-π\right) or 7$
5. Which is larger? Justify $ 2π or 6.2$
6. Which is larger? Justify $ π^{2 }or 10$