**Square & Square Root Unit Test**

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

**Part A: Matching** ( / 6 Points)

Match each definition with a vocabulary term that was discussed in class:

\_\_\_\_ The inverse operation of a squared number Benchmarks

\_\_\_\_ The memorized squares of whole numbers Imperfect Square

\_\_\_\_ When you multiply a number by itself Non-Perfect Square

\_\_\_\_ A square with all the same side lengths (4th column on chart) Number-line Strategy

\_\_\_\_ A real number that can be written as a simple Fraction Perfect Square

\_\_\_\_ Used to find the square root of Non-Perfect Squares Square Root

 Squared Number

**Part B: Multiple Choice** ( / 5 Points)

Pick the most correct answer for each of the following questions:

1 ) 32 can be expanded and solved as:

 (a) 3 + 3 = 6 (b) 3 + 2 = 5

(c) 3 x 2 = 6 (c) 3 x 3 = 9

2 ) 82 can be expanded and solved as:

 (a) 8 + 8 = 16 (b) 8 + 2 = 10

 (c) 8 x 8 = 46 (d) 8 x 8 = 64

3 ) $√81$ = \_\_

1. 0.9 (b) 9

(c) 19 (d) 40.5

4 ) $\sqrt{9}/4$ = \_\_

1. 3/2 (b) 2.25

(c) 3/4 (d) 36

5 ) $\sqrt{0.16}$ = \_\_

 (a) 0.04 (b) 0.4

 (b) 4.0 (c) 4.4

**Part C: Short Answer** ( / 12 Points)

Answer the following questions. Please show all of your steps and explain your reasoning if asked:

1 ) What two consecutive whole numbers does $\sqrt{84}$ fall between? ( / 1 Point)

2 ) Which whole number is $\sqrt{34}$ closer to? Explain your reasoning. ( / 2 Points)

3 ) Is the following a good estimate of this square root? $\sqrt{73}$ is between 8 and 9 .

 ( / 2 Points)

4 ) What is the answer to $\sqrt{16x16}$ How did you figure it out? ( / 2 Points)

5 ) $\sqrt{169}$ ( / 1 Point)

6 ) Estimate the following square roots & plot them on a number line ( / 4 Points)

 $\sqrt{9}$ $\sqrt{23}$ -$\sqrt{42}$ $\sqrt{7}$

**Part D: Word Problem**

Answer the following question. Please show all of your steps and remember to answer in a complete sentence.

Mrs. Thompson wants to buy a blanket for her dog Kevin. Kevin has a dog house with an area of 169 square inches.

- What is the length of one side of his dog house? ( / 1 Point)

- Draw and label what this might look like. ( / 2 Points)

- If she purchases a blanket with a side length of 11 inches, ( / 1 Points)

 will it fit in Kevin’s house with no overlap?

Ethan is helping his dad carpet their square living room over Christmas. His living room has an area of 112 square feet.

- Draw and label what Ethan’s living room might look like. ( / 2 Points)

- What is the length of the side length of the living room? ( / 3 Points)