

## ESTIMATING THE ROOT OF NON-SQUARE NUMBERS

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Due Date: \_\_\_\_\_

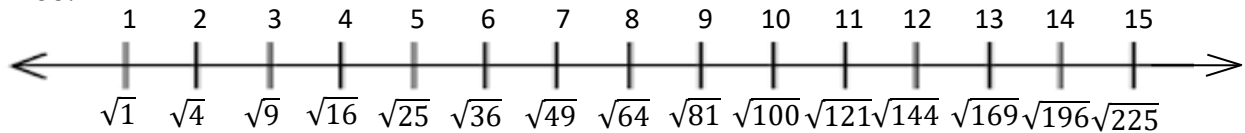
Family Member Signature: \_\_\_\_\_

### Objective:

To practice estimating the square root of non-perfect square numbers.

### Necessary Information:

All numbers have a square root. Some roots are whole numbers and others are not. We use our perfect squares to help us estimate numbers that aren't as nice.

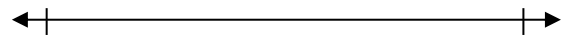
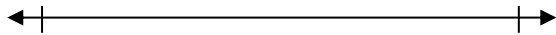


### Practice Section:

1. Use your knowledge of square numbers to help you estimate the following:

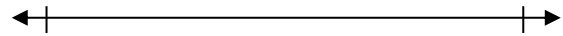
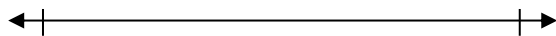
a)  $\sqrt{5} \approx$

c)  $\sqrt{110} \approx$



b)  $\sqrt{34} \approx$

d)  $\sqrt{50} \approx$



2. Use  $<$ ,  $>$ , or  $=$  and compare the following numbers.

a)  $\sqrt{5}$   5

c)  $\sqrt{49} + 2$    $\sqrt{81}$

b) 12   $\sqrt{144}$

d) 4.2   $\sqrt{24}$

3. Rebecca was shopping online and found a **square** rug with an area of  $17 \text{ m}^2$ . The dimensions of her bedroom are  $4 \text{ m} \times 5 \text{ m}$ .

Draw a diagram of Rebecca's room.	Draw a diagram of the rug Rebecca is interested in buying.
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The rug will **not** fit in her room. Explain why not.

**In Your Real World:**

With a family member, use a calculator to determine the following.

- a)  $\sqrt{5} \approx$
- b)  $\sqrt{110} \approx$
- c)  $\sqrt{34} \approx$
- d)  $\sqrt{50} \approx$

Were the answers close to what you estimated in question #1?