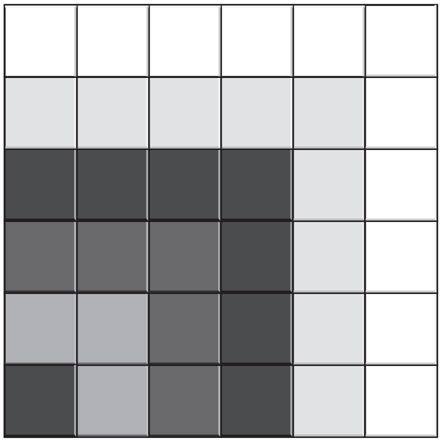
Name ______________________________

Use Color Tiles to estimate the square root of the given number. Fill in the blanks. Write a sentence about the estimate of the square root.

1. $\sqrt{28}$



28 is between the square numbers of

________ and ________.

$\sqrt{28}$ is between ________ and ________.

It is closer to ________.

Using Color Tiles, model square numbers to help you estimate the given square root. Sketch the model. Write the estimate and justify it.

2. $\sqrt{76}$

76 is between the square numbers of

________ and ________.

$\sqrt{76}$ is between ________ and ________.

It is closer to ________.

Estimate each square root. Write the two numbers the square root is between and circle the number it is closer to.

3. $\sqrt{15}$

4. $\sqrt{45}$

5. $\sqrt{33}$

6. $\sqrt{65}$

7. $\sqrt{20}$

8. $\sqrt{50}$

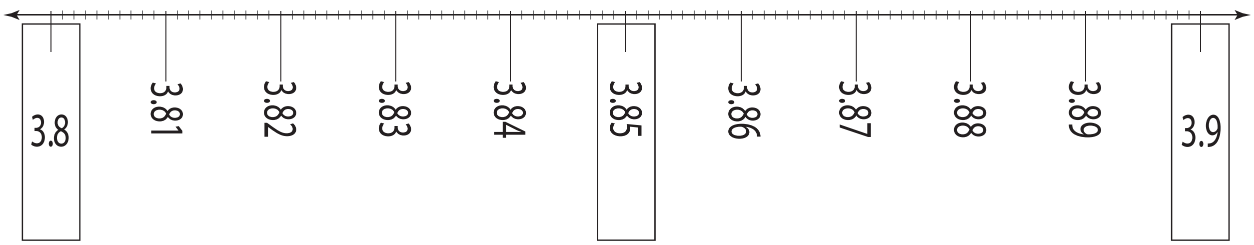
Name ________________________________

Challenge! Explain how you decide which two numbers the value of a square root is between.

Name ______________________________

Use the Folding Number Line to estimate the square root. Fill in the blanks.

1. $\sqrt{15}$



$\sqrt{15}$ is between the whole numbers ______ and ______.

A better estimate is between ______ and ______.

A better estimate is between ______ and ______.

A better estimate is between ______ and ______.

Using the Folding Number Line, estimate the square root. Fill in the blanks.

2. $\sqrt{38}$

$\sqrt{38}$ is between the whole numbers ______ and ______.

A better estimate is between ______ and ______.

A better estimate is between ______ and ______.

A better estimate is between ______ and ______.

Give the tenths interval on which the irrational number falls.

3. $\sqrt{75}$ ______

4. $\sqrt{56}$ ______

5. $\sqrt{117}$ ______

6. $\sqrt{48}$ ______

Name ___________________________________

Challenge! Using the Folding Number Line, show $\sqrt{17}$ and explain why increasing the number of decimal places in the endpoints of a range makes the estimate of an irrational square root more accurate.