

**Topic: 1.1 Square
Roots of Perfect
Squares**

Name: _____

Class: Math 9

Date: _____

Questions/Main Ideas:

Notes:

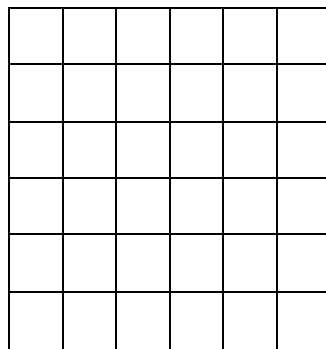
Goals:

1. Find the perfect square if given its square roots.
2. Identify a fraction that is a perfect square.
3. Identify a decimal that is a perfect square.

A **perfect square** is the resulting product when any number is multiplied by itself. For example, 25 is a perfect square because 5×5 or $5^2 = 25$.

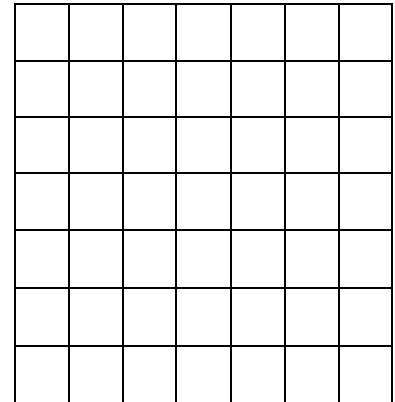
A **square root** is any number that when multiplied by itself results in a given number. So, 5 is the square root of 25 because 5×5 is 25

Both of the above are unique because they can be represented by using a square, where the area of the square is the perfect square and the side length is equal to the square root of the area.



Side Length =

Area =



Side Length =

Area =

Examples:

1. Given the following square roots find the perfect square.

a. 9

b. $\frac{2}{5}$

c. 1.5

In order to determine if a fraction is a perfect square or not we must first simplify to lowest terms.

2. Determine if each of the following fractions is a perfect square.

a. $\frac{12}{27}$

b. $\frac{8}{10}$

c. $\frac{1}{9}$

To determine if a decimal is a perfect square we want to convert to a fraction.

3. Is each of the following a perfect square?

a. .225

b. 1.96

c. 8.1