Square Roots

Reporting Category Number and Number Sense

Topic Determining square roots

Primary SOL 7.1d The student will determine square roots.

Materials

- Square Roots Activity Sheet (attached)
- Calculator

Vocabulary

square, perfect square, exponent (earlier grades)

square root, $\sqrt{\ }$ (7.1)

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Give each student a copy of the Square Roots Activity Sheet, and have them complete the chart.
2. Explain that the square root of a number is one of its two equal factors. The chart on the activity sheet displays only perfect squares.
3. Give students some more perfect squares, and ask them to determine the square root.

Assessment

- **Questions**
  - What is a square root?
  - What is a perfect square?
  - Which number does not belong: 81, 99, 100, and 121? Why?
- **Journal/Writing Prompts**
  - Explain the difference between finding the square root and squaring a number.
  - Explain to a friend how to find the square root of a number.
  - Explain whether every number has a square root that is a whole number.

Extensions and Connections (for all students)

- Have students continue the Square Roots Activity Sheet to find all the perfect squares through 1,000.

Strategies for Differentiation

- Give students square tiles. Construct squares using the square tiles. The square root of the area is the measurement of a side.
- Use a hundred board or chart to identify perfect squares by putting a square around each number and the numerical expression.

Square Roots Activity Sheet

Name _____ **Date** _____

Number of tiles (area of the square)	Dimensions of number of tiles	$\sqrt{area}$	Squares on a side
1	1 × 1	1	$\sqrt{1} = 1$
4	2 × 2	2	$\sqrt{4} = 2$
9			
16			
25			
36			
49			
64			
81			
100			
121			
144			
169			
196			
225			
256			
289			
324			
361			
400			