

Introduction to Lesson 6

Lesson 6 reinforces content learned in the previous lessons and introduces square roots. The Project INSPIRE team recommends that activities be completed in the order provided.

Activity 1: Symbol List

Directions: Review the Symbol List with the student before beginning the activities. If the student is not familiar with any symbol spend time introducing it and how it is used in math materials.

⠠ opening square root

⠡ termination indicator

Activity 2: Maze Answers

Directions: Have the student read each expression as they advance through the maze.

Start

$\sqrt{4}$	square root of 4	⠠⠠⠠
$\sqrt{100}$	square root of 100	⠠⠠⠠⠠⠠
$\sqrt{x + y}$	square root of x plus y end root	⠠⠠⠠⠠⠠
$\sqrt{y^4}$	square root of y to the fourth power end root	⠠⠠⠠⠠⠠⠠
$\sqrt{x^2 + 2}$	square root of x squared plus two end root	⠠⠠⠠⠠⠠⠠⠠
$\sqrt{3 + y^3}$	square root of three plus y cubed end root	⠠⠠⠠⠠⠠⠠⠠

$\sqrt{\frac{x}{y}}$ square root of the fraction x over y ⠠⠠⠠⠠⠠⠠⠠⠠

$5\sqrt{9}$ five square root of 9 ⠠⠠⠠⠠⠠

$\sqrt{y^4}$ square root of y end root to the ⠠⠠⠠⠠⠠
fourth power

Finish

Activity 3: What is Wrong?

Directions: Have the student read the expressions in each of the four quadrants. What is wrong with each of the first three expressions? It is a common mistake. The last choice is always correct. There is also a challenge puzzle that has two mistakes.

Square root of twenty-five

⠠⠠⠠⠠⠠	⠠⠠⠠
⠠⠠⠠⠠	⠠⠠⠠⠠

Challenge (Find two mistakes.)

Ten minus the square root of nine squared end root

⠠⠠⠠⠠ ⠠⠠⠠⠠

Activity 4: Which One Doesn't Belong?

Directions: Have the student read the expression in each of the four quadrants and share their reasoning as to "Which One Doesn't Belong and Why?" The great thing about this activity is that there are no wrong answers. As long as the student's reasoning is accurate, they are correct.

Note: Be sure to watch the video Sara Larkin created that explains how to facilitate the “Which One Doesn’t Belong?” activity.

1.

$\sqrt{121}$	$\sqrt{16}$
$\sqrt{9}$	$\sqrt{73}$

2.

\sqrt{x}	$\sqrt{5^2}$
$\sqrt{\frac{1}{4}}$	$-\sqrt{100}$

Activity 5: What is the Question?

Directions: Now is the student’s chance to be creative! The student will be given the answer and needs to come up with a question which gives them that answer. There is an example of a question to get them started, but they must come up with their own. Challenge the student to use as many different symbols as they can!

Answer: $\sqrt{30}$

Question example: $\sqrt{42 - 12}$

Your question that gives the same answer:

Activity 6: Boggle

Directions: There are two Boggle cards with symbols included from Lessons 1 to 6. Challenge the student to create as many problems using the symbols on their game card. Each symbol selected must touch the next symbol either left/right, up/down, or diagonal. Symbols may be used multiple times. The student earns one point for each problem created and brailled properly. If two or more students are playing together, students only earn points for problems that no one else creates! If preferred, students can be encouraged to create problems that require almost all of the symbols on the card or as many symbols as possible.