

Lesson Summary

A positive number whose square is equal to a positive number b is denoted by the symbol \sqrt{b} . The symbol \sqrt{b} automatically denotes a positive number. For example, $\sqrt{4}$ is always 2, not -2 . The number \sqrt{b} is called a *positive square root of b* .

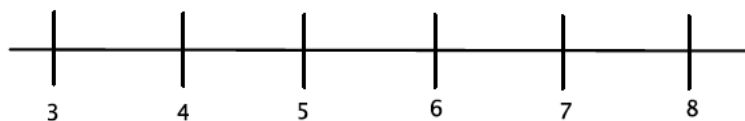
The square root of a perfect square of a whole number is that whole number. However, there are many whole numbers that are not perfect squares.

Problem Set

Determine the positive square root of the number given. If the number is not a perfect square, determine the integer to which the square root would be closest.

1. $\sqrt{169}$
2. $\sqrt{256}$
3. $\sqrt{81}$
4. $\sqrt{147}$
5. $\sqrt{8}$
6. Which of the numbers in Problems 1–5 are not perfect squares? Explain.
7. Place the following list of numbers in their approximate locations on a number line.

$\sqrt{32}$, $\sqrt{12}$, $\sqrt{27}$, $\sqrt{18}$, $\sqrt{23}$, and $\sqrt{50}$



8. Between which two integers will $\sqrt{45}$ be located? Explain how you know.