REVIEW: Square Roots

Name _____

- Key Concept and Vocabulary -

A **square root** of a number is a number that when multiplied by itself, equals the given number. Every positive number has a positive *and* a negative square root. A **perfect square** is a number with integers as its square roots.

Positive Square Root: $\sqrt{9} = 3$

Negative Square Root: $-\sqrt{9} = -3$

Both Square Roots: $\pm \sqrt{9} = \pm 3$

Skill Examples

1. $\sqrt{36}$

Because
$$6^2 = 36$$
, $\sqrt{36} = \sqrt{6^2} = 6$.

- **2.** $-\sqrt{144}$
 - Because $12^2 = 144$, $-\sqrt{144} = -\sqrt{12^2} = -12$.
- **3.** $\pm \sqrt{3.24}$
 - Because $1.8^2 = 3.24$, $\pm \sqrt{3.24} = \pm \sqrt{1.8^2} = 1.8$ and -1.8.

Application Example

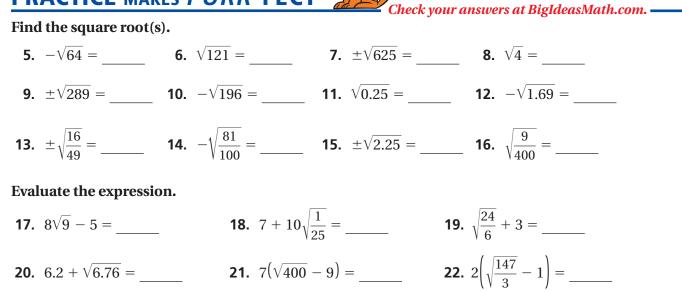
4. The area of a square table top is 256 square inches. What is the length of one side of the table top?

Square root

 $A = s^{2}$ $256 = s^{2}$ $\sqrt{256} = \sqrt{s^{2}}$ 16 = s

The length of one side of the table top is 16 inches.

PRACTICE MAKES *PURR*-FECT[™]



23. ROOM The area of the floor of a square room is 441 square feet. What is the length of one side of the floor of the room?