**2.7: Find Square Roots and Compare Real Numbers**

**Goals:** \*Find square roots of numbers

\*Approximate a square root between two integers

\*Order real numbers

\*Classify real numbers

**Square Roots:**

**SYMBOL:**

**Evaluate the expression:**

**Ex:**  **Ex:**  **Ex:**

**Ex:**  **Ex:**  **Ex:**

**Ex:**  **Ex:**  **Ex:**

**Ex:**  **Ex:**

**Solve:**

**Ex:** *x*² = 144 **Ex:** *x*² = 64 **Ex:** *x*² = 1

**Approximate Square Roots:**

**Ex: Ex:**

**Ex: Ex:**

**Ex:** The top of a folding table is a square whose area is 945 square inches. Approximate the side length of the tabletop to the nearest inch.

**Ex:** The top of a square box has an area of 320 square inches. Approximate the side length of the box top to the nearest inch.

**Evaluate the expression for the given value of *x*:**

**Ex:**  when *x* = 64 **Ex:**  when *x* = 36

**Extension:**

**If means to find the square root (the number times itself) that equals *x*, what do you think means?**

**Evaluate:**

**Ex:**  **Ex:**  **Ex:**

**Irrational Number:**

**Classify the following numbers using all names that apply:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **Rational?** | **Irrational?** | **Integer?** | **Whole?** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Order the following numbers from least to greatest:**

**Ex:**  **Ex:**

**Ex:**