

Name _____

Rational Numbers

Any number that can be written as a ratio of two nonzero integers is a rational number.

Decimal expansions of rational numbers either terminate or repeat.

All integers are rational numbers.

Examples: -235 $\frac{3}{4}$ $0.9\bar{4}$

Irrational Numbers

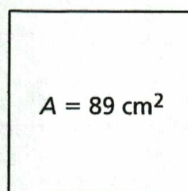
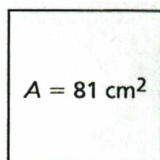
Numbers that are not rational are called irrational.

The decimal expansion of an irrational number does not terminate or repeat.

Square roots of nonperfect squares are irrational numbers.

Examples: $4.121121112\dots$ π $\sqrt{8}$

For each square below, is the side length rational or irrational?



1. What is the formula for the area of a square?
2. If you know the area of a square, how can you find its side length?
3. Write the side length of each square as a square root.
4. Is each side length rational or irrational? Explain.

On the Back!

5. Vidal has a screw that measures $\frac{1}{7}$ inch. Is $\frac{1}{7}$ a rational number or an irrational number? Explain.