

Irrational Numbers and Decimal Expansion - Guided Lesson Explanation**Explanation#1**

1) Do the actual math and divide as the problem states: $17/100$

(2 zeroes = move the decimal to the left twice)

$$17. = 0.17$$

Answer is: 0.17

Explanation#2

Irrational numbers are numbers that cannot be written as $\frac{a}{b}$.

This is when a and b are integers and b is not equal to zero.

When written as decimals, irrational numbers **do not** terminate or repeat.

Rational numbers can be written as $\frac{a}{b}$ with the same parameters.

In decimal form, rational numbers terminate or repeat.

Step 3) A) Rational – It is a whole integer.

B) Irrational – The decimal doesn't repeat or terminate.

C) Rational – In standard form the number is whole (4).

D) Rational – is a terminating decimal number, so it is a rational number.

Explanation#3

Every place value name dictates the fraction.

0	.	6			
ones		tenths	hundredths	thousandths	ten- thousandths

If you were to name this number it would be six-tenths. If we write six-

tenths as a fraction it equals: $\frac{6}{10}$

