Name & Block: KEY

Real Numbers

Rational Numbers

6.73 $\frac{7}{8}$ 0.6 $4\frac{1}{2}$ $-\frac{1}{2}$ $0.\overline{5}$ 1.9 $0.\overline{78}$

Numbers that can be written as fractions; decimals that repeat or terminate (end)

* positive or negative

Integers

Whole numbers AND their opposites

$\ldots, -3, -2, -1, 0, 1, 2, 3, \ldots$

* No fractions, No decimals

Whole Numbers

Counting numbers AND 0

0, 1, 2, 3, ...

Natural Numbers

Counting numbers

Ex: 1, 2, 3, 4, ...

Irrational Numbers

$-\sqrt{7}$ $0.7149386\ldots$ $\sqrt{95}$ π $4.738612\ldots$ $\sqrt{2}$

Numbers that cannot be written as fractions

* square roots of non-perfect squares
* decimals that DO NOT repeat or terminate

True or False?

1. All whole numbers are integers. (TRUE) FALSE because _____
2. All integers are whole numbers. TRUE (FALSE) because Negative integers are not whole
3. Some rational numbers are integers. (TRUE) FALSE because _____
4. Some whole numbers are irrational numbers. TRUE (FALSE) because ALL whole numbers are rational
5. The set of irrational numbers is a subset of the set of rational numbers. TRUE (FALSE) because Irrational numbers are NOT rational
6. Every element of the set of natural numbers is a rational number. (TRUE) FALSE because _____

Write each number in the correct location on the diagram below. Each number should be written only once.

$\{-6,\ \ 2.73,\ \ \frac{3}{7},\ \ \sqrt{2},\ \ \sqrt{9},\ \ -100,\ \ 0,\ \ \pi,\ \ 1,\ \ -\frac{1}{2},\ \ -3.8,\ \ 5.\overline{42},\ \ 8.293017\ldots\}$