

Name \_\_\_\_\_

Date \_\_\_\_\_

Mr. Tallman

Math 7

### Homework # 11 - Sets of Numbers & Rational vs Irrational

1) Matching Column: Match each set of numbers with the appropriate definition or list of numbers. Write a CAPITAL letter next to each set of numbers to indicate your choice.

- Irrational Numbers D
- Integers A
- Rational Numbers E
- Whole Numbers B
- Natural (Counting) Numbers C

A) {...-4, -3, -2, -1, 0, 1, 2, 3, 4,...}

B) {0, 1, 2, 3, 4, 5, .....}

C) Whole numbers excluding zero.

D) Numbers that have non repeating or non-terminating decimals.

E) Numbers that can be written as fractions and/or terminating or repeating decimals.

2) True or False: The set of irrational numbers is a subset of the set of real numbers. False

3) True or False: The number  $\frac{1}{2}$  is an integer. False

For each example, circle whether the number is rational or irrational. Be sure to explain your choice.

4) $\frac{1}{2}$ <u>Rational</u> Irrational Fraction	5) 9 <u>Rational</u> Irrational Whole Number
6) 2.35 <u>Rational</u> Irrational terminating decimal	7) $-2\pi$ Rational <u>Irrational</u> pi is always irrational
8) 76.19375638502... Rational <u>Irrational</u> Non-terminating, non-repeating decimal	9) -8.656565... <u>Rational</u> Irrational Repeating Decimal



**True or False**

11) The number  $\sqrt{12}$  is rational. False

12) Irrational numbers can be expressed as fractions. False

13) The number  $5\frac{3}{13}$  is rational. True

14) The number  $-4.23487801275709 \dots$  is irrational. True