

Name _____
Mrs. Roumbos

Date _____
8R Period _____

Mathematical Definitions

1) Natural Number: also known as _____ . They are whole and positive:

Ex:

2) Whole Number: The _____ and _____.

Ex:

3) Integer: _____ and _____ numbers and _____ (numbers and their opposites)

Ex:

4) Even Number: numbers that _____ be divided by _____ evenly.

Ex:

5) Odd Number: numbers that _____ be divided by _____ evenly.

Ex:

6) Ratio: a _____ of two numbers (usually by _____). Also a fancy name for a _____

Ex:

7) Factor: A number that is _____ by another number to get a _____.

Ex:

8) Operation: A process such as _____, _____, _____, and _____ performed in a specific sequence. Known as _____ or _____.

9) Perfect Square: The _____ of a number _____. (When you multiply a number by itself)

Ex:

*The first 16 perfect squares are: {0, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225...}

10) Square root: symbol: _____ (called a radical). It is one of the two _____ factors of a number. (The number you multiplied by itself to get the perfect square)

Ex:

11) Rational Number-

- Number that _____ be written as a _____ where the denominator is _____

Ex:

- _____

Ex:

- Decimals that _____ or _____

Ex:

- _____ square roots.

Ex:

12) Irrational Number-

- Numbers that _____ be written as a _____ where the denominator is _____
- _____ and _____ decimals

Ex:

- _____ square roots

Ex:

- _____

13) Real Number:

- _____ plus _____
- _____
- _____ and _____
- _____ and _____
- _____

14) Not Real:

- _____ division by _____

Ex:

- no _____

Ex:

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What are the sets of numbers?

Matching:

- | | |
|-----------------------------|--|
| 1. Rational Numbers _____ | A. { 1, 2, 3, ... } |
| 2. Integers _____ | B. {... -3, -2, -1, 0, 1, 2, 3...} |
| 3. Whole Numbers _____ | C. {Union of Rational & Irrational #'s} |
| 4. Irrational Numbers _____ | D. { 0, 1, 2, 3 ... } |
| 5. Natural Numbers _____ | E. {The quotient of two integers} |
| 6. Real Numbers _____ | F. {Non-terminating, non-repeating decimals} |

Fill Ins:

1. Another name for the set of natural number is: _____.
2. If zero is added to the set of natural numbers it becomes the set of _____.
3. _____ numbers are integers that are exactly divisible by 2.
4. _____ numbers are integers that have a remainder of 1, when divided by 2.
5. The set of whole numbers combines with their opposites are called: _____.
6. A ratio is a fancy name for a: _____
7. What are the factors of 20: _____
8. List the first 11 perfect squares _____
9. The opposite of squaring a number is called taking the _____.

State whether the following are rational or irrational. Why?

- | | | |
|----------------------|------------------------|------------------------|
| 1) .36 _____ | 2) $\frac{1}{2}$ _____ | 3) .182640462... _____ |
| 4) $\sqrt{17}$ _____ | 5) .5555 _____ | 6) $\sqrt{64}$ _____ |