

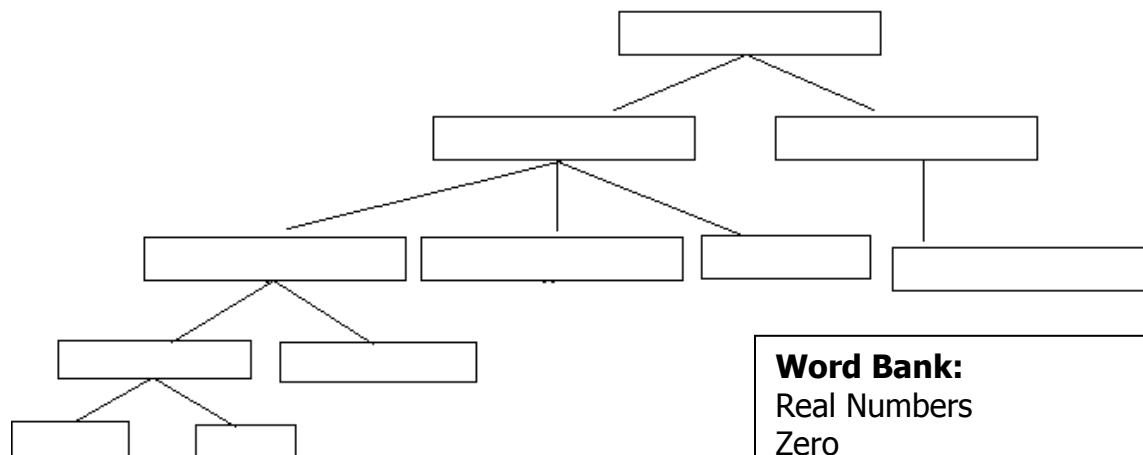
Name:

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# The Real Number System

## 8<sup>th</sup> Grade REVIEW for Quiz 3

Using the word bank, fill in the tree diagram showing the relationship of the real numbers.



**Word Bank:**

Real Numbers  
Zero  
Nonterminating Nonrepeating Decimals  
Rational Numbers  
Irrational Numbers  
Natural/Counting Numbers  
Terminating Decimals  
Whole Numbers  
Repeating Decimals  
Integers  
Negative Integers

Check each number as *natural, whole, integer, rational, irrational, terminating, repeating, nonterminating, nonrepeating, or real number*.  
Check ALL names that apply.

11.  $\sqrt{49}$
- Natural
  - Whole
  - Integer
  - Rational
  - Irrational
  - Terminating
  - Repeating
  - Nonterm/Nonrepeating
  - Real

12.  $-\sqrt{169}$
- Natural
  - Whole
  - Integer
  - Rational
  - Irrational
  - Terminating
  - Repeating
  - Nonterm/Nonrepeating
  - Real

13.  $\frac{1}{5}$

- Natural
- Whole
- Integer
- Rational
- Irrational
- Terminating
- Repeating
- Nonterm/Nonrepeating
- Real

14.  $\frac{2}{3}$

- Natural
- Whole
- Integer
- Rational
- Irrational
- Terminating
- Repeating
- Nonterm/Nonrepeating
- Real

15.  $\pi$

- Natural
- Whole
- Integer
- Rational
- Irrational
- Terminating
- Repeating
- Nonterm/Nonrepeating
- Real

16.  $2\frac{1}{4}$

- Natural
- Whole
- Integer
- Rational
- Irrational
- Terminating
- Repeating
- Nonterm/Nonrepeating
- Real

17.  $3.\bar{6}$

- Natural
- Whole
- Integer
- Rational
- Irrational
- Terminating
- Repeating
- Nonterm/Nonrepeating
- Real

18. 2.341...

- Natural
- Whole
- Integer
- Rational
- Irrational
- Terminating
- Repeating
- Nonterm/Nonrepeating
- Real

Identify if the following statements are sometimes, always, or never true.

19. An irrational number is a real number. \_\_\_\_\_

20. A real number is a rational number. \_\_\_\_\_

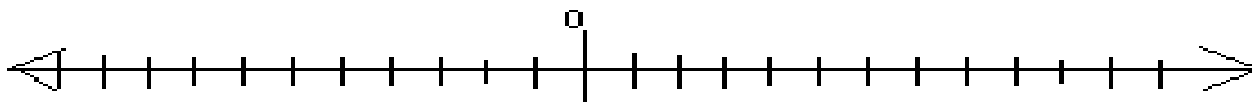
21. An integer is a rational number. \_\_\_\_\_

22. 0.1235... is an irrational number. \_\_\_\_\_

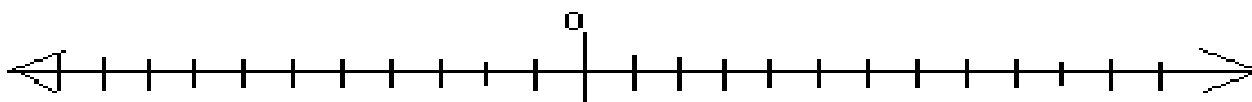
23.  $\pi$  is an irrational number. \_\_\_\_\_

Plot the following numbers on a number line.

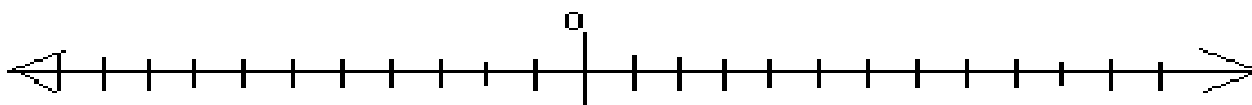
24.  $A = -2$ ,  $B = 2.25$ ,  $C = \sqrt{16}$ ,  $D = -\sqrt{25}$



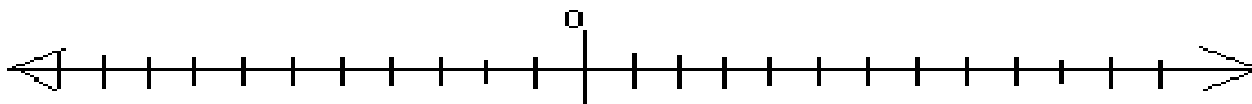
25.  $A = -1.6$ ,  $B = 1.2$ ,  $C = \sqrt{49}$ ,  $D = \sqrt{30}$



26.  $A = 3.4$ ,  $B = -4.2$ ,  $C = -0.4$ ,  $D = 4.0$



27.  $A = -\frac{3}{2}$ ,  $B = 3.9$ ,  $C = -1.5$ ,  $D = \frac{5}{3}$



Find the square roots for the following numbers

28.  $\sqrt{256} =$

29.  $\sqrt{81} =$

30.  $\sqrt{121} =$

31.  $\sqrt{144} =$

32.  $-\sqrt{25} =$

33.  $-\sqrt{9} =$

**34. – 47. Do the following conversions:** (reduce the fractions)

Fraction	Decimal	Percent
$\frac{1}{2}$	.5	50%
$\frac{2}{5}$		
	.43	
	.62	
		24%
	.25	
$\frac{2}{3}$		
		28%

**48. – 55. Solve:**

48.  $32 + (-2) - 2 =$  \_\_\_\_\_

49.  $-18 - 12 - 3 =$  \_\_\_\_\_

50.  $4 - (-18) + 5 =$  \_\_\_\_\_

51.  $15 + (-11)3 =$  \_\_\_\_\_

52.  $-6 \times -5 - 2 =$  \_\_\_\_\_

53.  $7 \times -5 - 5 =$  \_\_\_\_\_

54.  $-27 \div -3 - 5 =$  \_\_\_\_\_

55.  $-8 \div 2 + 6 =$  \_\_\_\_\_