

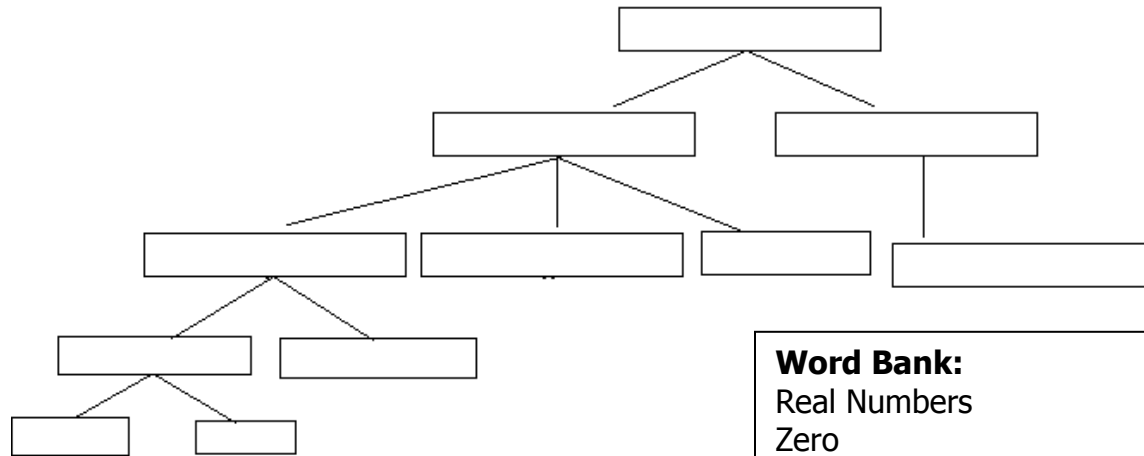
Name:

Period:

The Real Number System

8th 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. π

- ☐ 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.

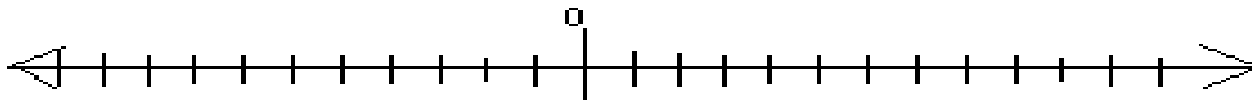
21. An integer is a rational number.

22. 0.1235... is an irrational number.

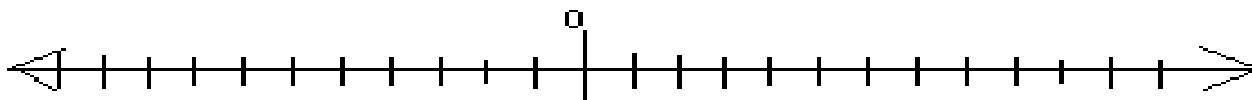
23. π is an irrational number.

Plot the following numbers on a number line.

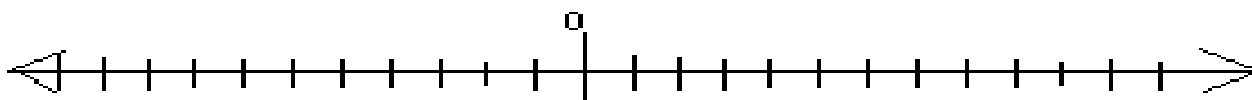
24. $A = -2$, $B = 2.25$, $C = \sqrt{16}$, $D = -\sqrt{25}$



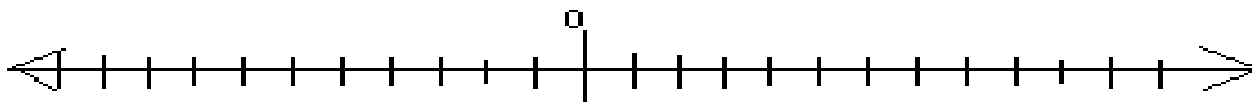
25. $A = -1.6$, $B = 1.2$, $C = \sqrt{49}$, $D = \sqrt{30}$



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. $-8 \div 2 + 6 =$ _____