

Today's Plan:

Learning Target (standard): I will learn the properties of the number system and accurately describe them.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.

NAME _____

BELL RINGER

1.) Evaluate $5y + 3$ for $y = 2$.

$$5 \cdot 2 + 3$$

$$10 + 3$$

$$13$$

2.) Make an input-output table for the function $y = 3x$. Use 0, 1, 2, and 3 as the domain.

*Plug each of these numbers in for x and find the value of y *

x	y
0	0
1	3
2	6
3	9

$$y = 3 \cdot 1$$

$$y = 3$$

$$y = 3 \cdot 2$$

$$y = 6$$

$$y = 3 \cdot 3$$

$$y = 9$$

3.) Solve $x/7 = 3$ using mental math.

$$\frac{x}{7} = 3$$

$$x = 21$$

Simplify.

$$\begin{aligned} & -5 - 2 - (-6) \\ & -5 - 2 + 6 \\ & -7 + 6 \\ & \textcircled{-1} \end{aligned}$$

$$\begin{aligned} & 6 - (-7) + 2 \\ & 6 + 7 + 2 \\ & 13 + 2 \\ & \textcircled{15} \end{aligned}$$

Simplify.

$$\begin{aligned} & -9 \div 3 + 4 \\ & -3 + 4 \\ & \textcircled{1} \end{aligned}$$

$$\begin{aligned} & \underline{-44 \div 22} \div -2 \\ & -2 \div -2 \\ & \textcircled{1} \end{aligned}$$

Classify the given number.

2.24 rational \mathbb{Q}
 real \mathbb{R}

Classify the given number.

$-\frac{11}{7}$ rational \mathbb{Q}
 real \mathbb{R}

Classify the given number.

$$\frac{28}{4} = 7$$

natural \mathbb{N}
 whole
 integer \mathbb{Z}
 rational \mathbb{Q}
 real \mathbb{R}

Properties of Real Numbers:

- Commutative "order"

$$a + b = b + a \quad (\text{addition})$$

$$a \cdot b = b \cdot a \quad (\text{multiplication})$$

$$3 + 4 = 4 + 3$$

$$3 \cdot 4 = 4 \cdot 3$$

$$6 - 3 \neq 3 - 6$$

$$\frac{10}{30} \neq \frac{30}{10}$$

Properties of Real Numbers:

$$\begin{array}{l} (1+2)+3 \\ 3+3 \\ 6 \end{array} \quad \begin{array}{l} 1+(2+3) \\ 1+5 \\ 6 \end{array}$$

- Associative "grouping"

$$a+(b+c) = (a+b)+c \quad (\text{addition})$$

$$(a \cdot b) \cdot c = a \cdot (b \cdot c) \quad (\text{multiplication})$$

$$5+(6+2) = (5+6)+2$$

$$5+8 = 11+2$$

$$13 = 13$$

$$(2 \cdot 3) \cdot 4 = 2 \cdot (3 \cdot 4)$$

$$6 \cdot 4 = 2 \cdot 12$$

$$24 = 24$$

Properties of Real Numbers:

- Identity "mirror"

$$a+0 = a \quad (\text{addition})$$

$$\underline{3}+0 = \underline{3}$$

$$a \cdot 1 = a \quad (\text{multiplication})$$

$$\underline{3} \cdot 1 = \underline{3}$$

Properties of Real Numbers:

- Zero Property "answer of 0"

$$a \cdot 0 = 0$$

$$2 \cdot 0 = 0$$

$$-3 \cdot 0 = 0$$

Properties of Real Numbers:

- Distributive

$$a \cdot (b + c) = \underline{a \cdot b} + \underline{a \cdot c}$$

$$\underline{2}(\underline{x} + \underline{3}) = \underline{2x} + \underline{6}$$

State the property being used.

$$3 \cdot (2 \cdot 7) = (3 \cdot 2) \cdot 7$$

Associative of Multiplication

State the property being used.

$$2 + 4 = 4 + 2$$

Commutative of Addition

Assignment:

Worksheet 1-4 (both sides)