

DO NOW

What do you remember about the rules for adding, subtracting, multiplying and dividing signed numbers?

FINAL REVIEW #1

Order of Operations

P arenteses (Grouping)

Exponents

Multiply
Divide } L to R

Add
Subtract } L to R

GEMS

Examples:

$$\begin{array}{r} 1. \ 4 \cdot 9 + 3 \cdot 2 \\ 36 + 6 \\ 42 \end{array}$$

$$\begin{array}{r} 2. \ 6 \cdot 4 - 2 \\ 24 - 2 \\ 22 \end{array}$$

$$\begin{array}{r} 3. \ 5 + 3(7) \\ 5 + 21 \\ 26 \end{array}$$

$$\begin{array}{r} 4. \ 10 + 6 \div 3 \\ 10 + 2 \\ 12 \end{array}$$

$$\begin{array}{r} 5. \ 7(3) + 6(5) \\ 21 + 30 \\ 51 \end{array}$$

$$\begin{array}{r} 6. \ 36 - 21 \div 7 - 2 \\ 36 - 3 - 2 \\ 36 - 5 \\ 31 \end{array} \quad \left. \begin{array}{l} 36 - 3 - 2 \\ 33 - 2 \\ 31 \end{array} \right\}$$

Whole numbers - $\{0, 1, 2, 3, \dots\}$

Counting numbers - $\{1, 2, 3, \dots\}$

Integers - $\{\dots, -3, -2, -1, 0, 1, 2, 3, 4, \dots\}$

+ ← positive

- ← negative

INTEGER OPERATIONS

ADDITION

Same Sign - ADD, Keep Sign

Different signs - Subtract, Keep the sign of "bigger #"

SUBTRACT

Means - ADD THE OPPOSITE

MULTIPLY AND DIVIDE

Same sign - always positive

Different signs - always negative

Examples:

$$1. \ -30 + 30 - 23$$

$$\begin{array}{r} 0 - 23 \\ -23 \\ \hline -30 + 30 - 23 \\ -23 \\ \hline -30 + 30 - 23 \\ -53 + 30 = -23 \\ \hline 4(5 - 8) \\ 20 - 32 \\ -12 \\ \hline 4(5 - 8) \\ 4(-3) \\ -12 \end{array}$$

$$2. \ 6 - 10$$

$$-4$$

$$4. \ 9 - 2(-3)$$

$$\begin{array}{r} 9 + 6 \\ 15 \end{array}$$

$$5. \left(-\frac{1}{5}\right)\left(\frac{2}{3}\right)$$

$$\frac{-2}{15}$$

$$6. 7(-5) - 2(-4)$$

$$-35 + 8$$

$$-27$$

$$7. 3(-2)^2$$

$$3(4)$$

$$12$$

$$8. (90 \div 3) \div (-10)$$

$$30 \div -10$$

$$-3$$

HOMEWORK

Worksheet - Final Review #1