

9.23.2011 Order of Operations

Order of Operations Definition: The order we use to solve equations. (The order in which we perform operations when evaluating mathematical expressions is called **order of operations**.)

Ex. $3 + 4 \cdot 2 - 6 \div 3$

$3 + 4 \cdot 2 - 6 \div 3$ Restate the Problem

$3 + 8 - 2$ Multiply and Divide (left to right)

$11 - 2 = 9$ Add and Subtract (left to right)

P – Parentheses

Inverse Operations: Operations are inverses if they “undo” each other.

E – Exponents

Ex. Multiplication and Division are inverse operations

M – Multiplication

Ex. Addition and Subtractions are inverse Operations

D – Division

A – Addition

Inverse Operations are performed left to right when following PEMDAS

S – Subtraction

Ex. $(5 + 2 \cdot 5) \div 3 \cdot 2$

$(5 + 2 \cdot 5) \div 3 \cdot 2$ Restate the Problem

$(5 + 10) \div 3 \cdot 2$ Follow PEMDAS in Parentheses by Multiplying and Dividing

$15 \div 3 \cdot 2$ Parentheses

$5 \cdot 2 = 10$ Multiply and Divide (left to right)

9.23.2011 Adding Integers

Do Now: See Note from 9.12.2011 for order of operations (PEMDAS)

$2 + 4 \cdot 3 - 4 \div 2$

$2 + 12 - 2$ Multiply and Divide (left to right)

$14 - 2 = 12$ Add and Subtract (left to right)

Put a decimal between the 2 and 3. Then, write the number.

2345678

2.345678 two and three hundred forty five thousand six hundred seventy eight millionths

Notes

Integer

- Positive or Negative
- Includes 0
- Whole Numbers

Absolute Value

- Distance from zero
- The number without its sign
- Always positive

Greatest in Absolute Value

- Furthest from zero
- Largest number ignoring sign

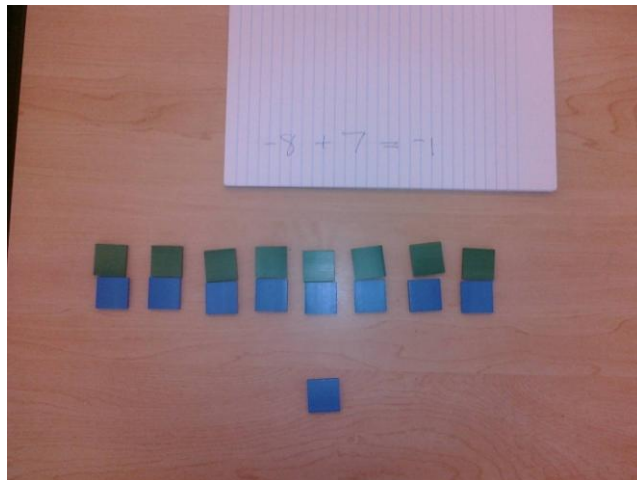
Adding Integers with Chips

- Blue Chips are Positive
- Green Chips are Negative
- A Blue Chip and a Green Chip sum to Zero
- Sum is what is left after removing all Zero Sum Pairs

Adding Integers (-8 + 7)



Adding Integers (-8 + 7)



Problems:

$$-35 + 14 = -21$$

$$-6 + -8 = -14$$

$$8 + -11 = -3$$

Rules for Adding Integers: