

Math Chapter 1 Study Guide Team 6B

Powers and Exponents

Factors: 2 or more numbers that are multiplied

Exponents tell how many times a base is used as a factor. (or how many times a number is multiplied by itself)

Example: $4^3 = 4 \times 4 \times 4$

$$\begin{array}{c} \text{exponent} \\ 3 \\ \text{base } 4 \end{array}$$

4^2 four to the second power or four squared

4^3 four to the third power or four cubed

Order of Operations

Parentheses, Exponents, Multiplication (from left to right), Division (from left to right), Addition, Subtraction. PEMDAS

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} Multiply or Divide from LEFT to RIGHT

} Add or Subtract from LEFT to RIGHT

Algebraic Expressions

A mathematical combination of numbers, variables and operations (+, -, \times , \div). An expression **does not** have an = sign.

Variable: a symbol, usually a letter used to represent an unknown number

Evaluate Expressions:

1. write the problem
2. change the variable to their number values
3. use order of operations to solve

Equations

Using *Guess and Check*, you must use **3 guesses or trials**. Plug your guesses for the value into the equation and check if it comes out.

$$12+X=15 ; 2,3,4$$

For Equations:

	Variable guess	Equation	Value
Guess 1	2	$12+2=$	14
Guess 2	3	$12+3=$	15
Guess 3	4	$12+4=$	16
$A+15=23$			
1.	6	$6+15$	21
2.	7	$7+15$	22
3.	8	$8+15$	23

Reminder:

3a mean 3 multiplied by a

ab means a multiplied by b