TSC | WILLIAM D. LAW, JR. LEARNING COMMONS

Opposites and Absolute Value

Algebra Basics Handout

I. Opposites

Opposites are two numbers that are the same distance from 0 but on opposite sides of 0.

Example: -2 is two places to the left of 0, 2 is two places to the right of 0, so -2 and 2 are opposites. A negative sign before parentheses means "the opposite of the number inside."

Expression	How to Read It	Simplified
-(3)	The opposite of 3	-3
-(-8)	The opposite of negative 8	8
-(0)	The opposite of zero	0

Practice Problems – Part I

1. Tell each number's distance and direction from zero:

a. -7 → ____places from 0; to the _____of 0

b. 14 → ____places from 0; to the_____ of 0

c. 0 → ____ places from 0; at 0

2. Where are all negative numbers? _____

3. Where are all positive numbers? _____

4. What is the opposite of -23? _____

5. What is the opposite of 47? _____

6. Read and simplify:

a. -(-3) → read: _____→ equals: _____

b. -(45) → read: _____→ equals: _____

c. -(0) → read:_____→ equals: 0

Opposites and Absolute Value

II. Absolute Value

|-4|	Absolute value of -4	4
|0|	Absolute value of 0	0

Opposites vs. Absolute Value

Expression	How to Read It	Result
-5	Negative five	-5
|-5|	Absolute value of negative five	5
-|5|	Opposite of the absolute value of 5	-5

Practice Problems – Part II

Tell how it's read and simplify:

#	Expression	How to Read It	Answer
1	-(9)	Opposite of 9	
2	-(-12)	Opposite of negative 12	
3	|34|	Absolute value of 34	
4	|-28|	Absolute value of -28	
5	-|-4|	Opposite of abs. value of -4	
6	-|5|	Opposite of abs. value of 5	
7	-(0)	Opposite of zero	
8	|0|	Absolute value of zero	
9	-|0|	Opposite of abs. value of 0	