Integers & Number Line Cheat Sheet

Quick reference for integer operations and number line concepts. Master these rules to handle positive and negative numbers with confidence.

The Number Line

Negative numbers are left of zero. Positive numbers are right of zero.

Numbers increase as you move right, decrease as you move left.

... -4, -3, -2, -1, 0, 1, 2, 3, 4 ...

Adding Integers

Same sign: Add the values, keep the sign

Example: (-3) + (-5) = -8

Different signs: Subtract smaller from larger, keep sign of larger absolute value

Example: (-7) + 4 = -3

Example: 6 + (-2) = 4

Subtracting Integers

Rule: Add the opposite (change subtraction to addition and flip the sign)

Example: 5 - 8 = 5 + (-8) = -3

Example: (-3) - (-7) = (-3) + 7 = 4

Example: (-2) - 5 = (-2) + (-5) = -7

Multiplying & Dividing

Same signs: Result is positive

Examples: (-4) x (-3) = 12, (-12) / (-4) = 3

Different signs: Result is negative

Examples: (-4) x 3 = -12, 12 / (-4) = -3

Absolute Value & Comparing

Absolute value: $|n|$ = distance from zero (always positive or zero)

Examples: $|-5|$ = 5, $|3|$ = 3, $|0|$ = 0

Comparing: The number further right on the number line is greater

Example: -2 > -7 (because -2 is right of -7)

Quick sign check: Count the negative signs. An even count of negatives gives a positive result. An odd count gives a negative result.