Name _____
Date _____

Integer Operations

KEY IDEA
Integers are the counting numbers, their negatives, and zero. Adding and subtracting move along the number line; multiplying and dividing follow the sign rules: same signs give a positive result, different signs give a negative result. Absolute value is a number's distance from zero, so it is never negative — $|-7| = 7$ and $|7| = 7$.

How to do it

1. For addition and subtraction, rewrite subtraction as adding the opposite: $a - b = a + (-b)$, then combine.
2. For multiplication and division, multiply or divide the absolute values first, then decide the sign: same signs give a positive answer, different signs give a negative answer.
3. Absolute value bars are grouping symbols — simplify what is inside completely, then drop the sign.
4. Check the sign of your answer separately from its size; that is where most integer mistakes happen.

Worked examples

Example 1. $-4 - 1$

-5

Example 2. $(8)(-7)$

-56

Example 3. $2 - (4)$

-2

Example 4. $5 - (-4)$

9

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Integer Operations

Directions: Simplify each expression.

1. 9 – 4	**2.** –7 – (9)	**3.** (14)(5)
4. 4 – (–11)	**5.** (–1)(–5)	**6.** (–12)(–11)
7. –4 + 8	**8.** 11 – 12	**9.** –9 – (9)
10. (5)(–5)	**11.** (11)(9)	**12.** 14 – 10
13. 6 – (10)	**14.** –1 – 4	**15.** –13 – 7
16. 9 + 11	**17.** (–14)(3)	**18.** (8)(–9)
19. –9 – (12)	**20.** 3 – (2)	**21.** –11 – 10
22. 2 – (–10)	**23.** –10 ÷ –5	**24.** 2 – (5)
25. –11 – (–7)	**26.** 7 + 8	**27.** –13 – 9
28. 9 – 6	**29.** –5 + 1	**30.** (–11)(–9)
31. –12 + 12	**32.** 6 – (6)	**33.** –6 – (–2)
34. 5 – (3)	**35.** 9 ÷ 1	**36.** –9 + 3
37. –14 – (1)	**38.** (–7)(2)	**39.** –12 + 4
40. –3 – (1)	**41.** 2 ÷ 2	**42.** 11 – (–2)
43. 7 – 1	**44.** –3 – 11	**45.** 3 – (5)