



2-4 Adding Integers (Pages 83–87)

You already know that the sum of two positive integers is a positive integer. The rules below will help you find the sign of the sum of two negative integers and the sign of the sum of a positive and a negative integer.

Adding Integers with the Same Sign	To add integers with the same sign, add their absolute values. Give the result the same sign as the integers.
Adding Integers with Different Signs	To add integers with different signs, subtract their absolute values. Give the result the same sign as the integer with the greater absolute value.

EXAMPLES

A Solve $g = -2 + (-10)$.

Add the absolute values. Give the result the same sign as the integers.

$$g = -(|-2| + |-10|)$$

$$g = -(2 + 10) \text{ or } -12$$

B Solve $n = -7 + 2$.

Subtract the absolute values. The result is negative because $|-7| > |2|$.

$$n = -(|-7| - |2|)$$

$$n = -(7 - 2) \text{ or } -5$$

PRACTICE

Solve each equation.

- | | | |
|--------------------|----------------------|--------------------|
| 1. $y = 7 + (-14)$ | 2. $b = -12 + 4$ | 3. $16 + (-4) = z$ |
| 4. $a = 6 + (-15)$ | 5. $c = 16 + (-15)$ | 6. $-12 + 31 = q$ |
| 7. $-3 + 8 = m$ | 8. $-4 + 13 = s$ | 9. $t = (-13) + 7$ |
| 10. $-7 + 8 = b$ | 11. $d = 10 + (-19)$ | 12. $f = -3 + 17$ |

Write an addition sentence for each situation. Then find the sum.

13. A hot air balloon is 750 feet high. It descends 325 feet.
 14. Cameron owes \$800 on his credit card and \$750 on his rent.

Solve each equation.

15. $y = 4 + (-10) + (-2)$ 16. $-2 + 4 + (-6) = x$

Simplify each expression.

17. $8x + (-12x)$ 18. $-5m + 9m$



19. Standardized Test Practice In the high deserts of New Mexico, the morning temperature averages -2°C in the spring. During a spring day, the temperature increases by an average of 27°C . What is the average high temperature during the spring?

- A** 29°C **B** 25°C **C** -25°C **D** -29°C

Answers: 1. -7 2. -8 3. 12 4. -9 5. 1 6. 19 7. 5 8. 9 9. -6 10. 1 11. -9 12. 14 13. $h = 750 + (-325)$; 425
 14. $m = -800 + (-750)$; -1550 15. -8 16. -4 17. -4x 18. 4m 19. B