

Dividing Integers (Pages 82–85)

The same rules of signs that you used for multiplying integers apply to dividing integers. The quotient of two integers with the same sign is positive, and the quotient of two integers with different signs is negative.

EXAMPLES

A Find $-56 \div (-7)$.

The signs are the same, so the quotient is positive.

$$-56 \div (-7) = 8$$

B Evaluate $\frac{xy}{3}$ if $x = -2$ and $y = 6$.

$$\frac{xy}{3} = \frac{(-2)(6)}{3} \quad \text{Replace } x \text{ with } -2 \text{ and } y \text{ with } 6.$$

$$= \frac{-12}{3} \quad \text{Multiply } (-2)(6).$$

$$= -4 \quad \frac{-12}{3} \text{ means } -12 \div 3.$$

Try These Together

1. Find $-18 \div 9$.

HINT: The signs are different.

2. Evaluate $\frac{x}{y}$ if $x = -6$ and $y = -3$.

HINT: $\frac{x}{y}$ means $x \div y$.

PRACTICE

Find each quotient.

3. $-20 \div (-4)$

4. $-28 \div 4$

5. $80 \div (-8)$

6. $-2 \div 2$

7. $42 \div 7$

8. $36 \div (-12)$

9. $-60 \div 5$

10. $-32 \div (-4)$

11. $63 \div (-9)$

12. $\frac{81}{-9}$

13. $\frac{-14}{7}$

14. $\frac{-45}{-5}$

Evaluate each expression if $a = 3$, $b = -9$, and $c = -6$.

15. $63 \div b$

16. $\frac{ac}{b}$

17. $\frac{4a}{c}$

18. $\frac{-5b}{a}$



19. Standardized Test Practice What was the average hourly change in temperature if the thermometer read 45°F at noon and 5°F at 5:00 P.M.?

A -9°

B -8°

C -5°

D 9°

Answers: 1. -2 2. 2 3. 5 4. -7 5. -10 6. -1 7. 6 8. -3 9. -12 10. 8 11. -7 12. -9 13. -2 14. 9 15. -7 16. 2 17. -2 18. 15 19. B