

# Dividing Integers

**Rules for dividing integers:**

- The quotient of two integers with the same sign is positive.
- The quotient of two integers with different signs is negative.

$54 \div (-6)$

$54 \div 6 = 9$

Because the signs of the two integers in the original problem are different, the sign of the quotient is negative.

So,  $54 \div (-6) = -9$ .

$-36 \div (-3)$

$36 \div 3 = 12$

Because the signs of the two integers in the original problem are the same, the sign of the quotient is positive.

So,  $-36 \div (-3) = 12$ .

Find each quotient.

1.  $-18 \div (-3)$  \_\_\_\_\_ 2.  $-28 \div 4$  \_\_\_\_\_ 3.  $-50 \div (-5)$  \_\_\_\_\_

4.  $-24 \div 6$  \_\_\_\_\_ 5.  $30 \div 6$  \_\_\_\_\_ 6.  $48 \div (-8)$  \_\_\_\_\_

Use order of operations to evaluate each expression for  $n = -4$ .

7.  $-40 \div n$  \_\_\_\_\_ 8.  $n \div 4$  \_\_\_\_\_ 9.  $76 \div n$  \_\_\_\_\_

10.  $8n \div 2$  \_\_\_\_\_ 11.  $14 + (n \div 2)$  \_\_\_\_\_ 12.  $-3n \div (-3)$  \_\_\_\_\_

13. Nathan and Haley went scuba diving. It took 3 minutes to dive 18 meters. What was the average descent rate of their dive? Find  $-18 \div 3$ .

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14. **Reasoning** Without computing the answer, how do you know if the quotient  $-232 \div 11$  is negative or positive?

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15. **Algebra** Write the next two integers in the pattern  $-48, -24, -12, \underline{\quad}, \underline{\quad}$

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