

Determine whether each expression is a monomial. Write *yes* or *no*. Explain your reasoning.

21. 122

24.  $\frac{-2g}{4h}$

22.  $3a^4$

25.  $\frac{5k}{10}$

23.  $2c + 2$

26.  $6m + 3n$

Examples 2-3 Simplify each expression.

27.  $(q^2)(2q^4)$

30.  $(y^6z^9)(6y^4z^2)$

33.  $(j^5k^7)^4$

36.  $[(3^2)^2]^4$

28.  $(-2u^2)(6u^6)$

31.  $(b^8c^6d^5)(7b^6c^2d)$

34.  $(n^3p)^4$

37.  $[(4r^2t)^3]^2$

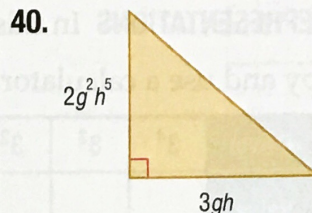
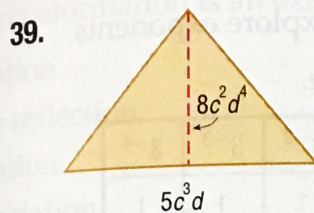
29.  $(9w^2x^8)(w^6x^4)$

32.  $(14fg^2h^2)(-3f^4g^2h^2)$

35.  $[(2^2)^2]^2$

38.  $[(-2xy^2)^3]^2$

Example 4 **GEOMETRY** Express the area of each triangle as a monomial.



Example 5 Simplify each expression.

41.  $(2a^3)^4(a^3)^3$

43.  $(2gh^4)^3[(-2g^4h)^3]^2$

45.  $(p^5r^2)^4(-7p^3r^4)^2(6pr^3)$

47.  $(5a^2b^3c^4)(6a^3b^4c^2)$

49.  $(0.5x^3)^2$

51.  $(-\frac{3}{4}c)^3$

53.  $(8y^3)(-3x^2y^2)(\frac{3}{8}xy^4)$

55.  $(-3r^3w^4)^3(2rw)^2(-3r^2)^3(4rw^2)^3(2r^2w^3)^4$

56.  $(3ab^2c)^2(-2a^2b^4)^2(a^4c^2)^3(a^2b^4c^5)^2(2a^3b^2c^4)^3$

42.  $(c^3)^2(-3c^5)^2$

44.  $(5k^2m)^3[(4km^4)^2]^2$

46.  $(5x^2y)^2(2xy^3z)^3(4xyz)$

48.  $(10xy^5z^3)(3x^4y^6z^3)$

50.  $(0.4h^5)^3$

52.  $(\frac{4}{5}a^2)^2$

54.  $(\frac{4}{7}m)^2(49m)(17p)(\frac{1}{34}p^5)$

57. **FINANCIAL LITERACY** Cleavon has money in an account that earns 3% simple interest. The formula for computing simple interest is  $I = Prt$ , where  $I$  is the interest earned,  $P$  represents the principal that he put into the account,  $r$  is the interest rate (in decimal form), and  $t$  represents time in years.

- Cleavon makes a deposit of  $\$2c$  and leaves it for 2 years. Write a monomial that represents the interest earned.
- If  $c$  represents a birthday gift of  $\$250$ , how much will Cleavon have in this account after 2 years?