

Extra Practice

Lesson 8-1

(pages 410–415)

Determine whether each expression is a monomial. Write *yes* or *no*. Explain your reasoning. **1–4. See margin for explanations.**

1. $n^2 - 3$ **no**

2. 53 **yes**

3. $9a^2b^3$ **yes**

4. $15 - x^2y$ **no**

Simplify.

5. $a^5(a)(a^7)$ **a^{13}**

8. $(bc^3)(b^4c^3)$ **b^5c^6**

11. $(3s^3t^2)(-4s^3t^2)$ **$-12s^6t^4$**

14. $-\frac{3}{4}a(a^2b^3c^4)$ **$-\frac{3}{4}a^3b^3c^4$**

17. $(\frac{2}{3}y^3)(3y^2)^3$ **$18y^9$**

6. $(r^3t^4)(r^4t^4)$ **r^7t^8**

9. $(-3mn^2)(5m^3n^2)$ **$-15m^4n^4$**

12. $x^3(x^4y^3)$ **x^7y^3**

15. $(\frac{1}{2}w^3)^2(w^4)^2$ **$\frac{1}{4}w^{14}$**

18. $(10s^3t)(-2s^2t^2)^3$ **$-80s^9t^7$**

7. $(x^3y^4)(xy^3)$ **x^4y^7**

10. $[(3^3)^2]^2$ **$531,441$**

13. $(1.1g^2h^4)^3$ **$1.331g^6h^{12}$**

16. $[(-2^3)^3]^2$ **$262,144$**

19. $(-0.2u^3w^4)^3$ **$-0.008u^9w^{12}$**

1. It shows subtraction, not multiplication of variables.

2. It is a real number and therefore a monomial.

3. It is a product of a number and two variables.

4. It shows subtraction, not multiplication of variables.