Name

8-2B Lesson Master

Questions on SPUR Objectives
See pages 521–523 for objectives.

SKILLS Objective A

In 1–4, an expression is given.

a. **Write the expression in expanded form.**

b. **Write the expression as a single power.**

1. $5^3 \cdot 5$

   a. _____

   b. _____

2. $x^3 \cdot x^2$

   a. _____

   b. _____

3. $(-3^4)^2$

   a. _____

   b. _____

4. $(x^3)^5$

   a. _____

   b. _____

In 5–25, simplify.

5. $a^5 \cdot a$ _____

6. $b^2 \cdot b^4$ _____

7. $c^7 \cdot -1c^3$ _____

8. $2d \cdot 5d^9$ _____

9. $e^3f^4 \cdot e^2f$ _____

10. $jk \cdot 3jk^2$ _____

11. $-2m^2n^3 \cdot -4m^4n^5$ _____

12. $(6p^0)^3$ _____

13. $2q(q^3)^4$ _____

14. $5(rs)^2$ _____

15. $3t^0(t^5)^5$ _____

16. $b^{20} \cdot b^5$ _____

17. $-u^{24} \cdot uv^3$ _____

18. $-10x^5 \cdot 0.2x^3$ _____

19. $wx^{17} \cdot w^{17}x$ _____

20. $7y^6z^3 \cdot 3y^2z^3$ _____

21. $-12c^{16}d^9 \cdot 0.5c^0d^7$ _____

22. $0.875ef^0 \cdot -16e^2f$ _____

23. $(9g^2)(9h^3)$ _____

24. $(10i)^2(0.01i^9)$ _____

25. $16j^{10}k^6 \cdot (0.5j^5k^2)^3$ _____

Name

PROPERTIES Objective G

In 26–33, solve for *x* and *y* and name the power property used to find the solution.

26. $2^5 \cdot 2^x = 2^{15}$ _____

27. $4^x \cdot 4^x = 4^{10}$ _____

28. $(6^3)^x = 6^{12}$ _____

29. $(7^x)^x = 7^9$ _____

30. $(a^3 \cdot a^x)^2 = a^6$ _____

31. $c^4(c^3)^x = c^{10}$ _____

32. $de^2 \cdot 3d^x e^y = 3d^3e^5$ _____

33. $(fg)^x \cdot f^3g^4 = f^9g^{10}$ _____

34. Write a multiplication problem that uses the Product of Powers Property to get an answer of k^{17}.

_____

35. Write a multiplication problem that uses the Power of a Power Property to get an answer of m^{20}.

_____