Name

8-9B Lesson Master

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

SKILLS Objective C

In 1–15, rewrite without parentheses and without negative exponents.

1. $(3a^7b^4)^{-2}$
2. $(4c^0d^9)(-3c^5d^{-4})$
3. $(2e)(9e)^{-2}$
4. $(-9f^3g^{-3})(6f^2g^5)^{-2}$
5. $(7h^3j^4)^{-1}(h^5j)$
6. $\left(\frac{k^4m^5}{7km^4}\right)^{-1}$
7. $\left(\frac{3np}{2n^5p^2}\right)^4$
8. $\frac{-2qr^5}{9q^2r^8}$
9. $\frac{16s^7}{(4s^2)^3}$
10. $\frac{-10t^2u^{11}}{18tu^{13}} \cdot 15tu^8$
11. $\frac{7v^5}{17w^3} \cdot -34v^{-2}w^{12}$
12. $\frac{-8x^4y}{5x^{13}} \cdot (-24xy)^{-1}$
13. $\left(\frac{2ab^2}{3c}\right)^{-3} \cdot \frac{4a^6b}{3c}$
14. $\left(\frac{5d}{3e}\right)^2 \cdot \left(\frac{3e}{5d}\right)^{-2}$
15. $(-2m^{14}) \cdot (2m^{14})^{-1}$

PROPERTIES Objective F

In 16–18, tell whether the pattern $\frac{1}{2}x^4 = 2x^2$ is true for the given instances.

16. $x = 0$
17. $x = 1$
18. $x = 2$

Name

8-9B page 2

19. Is there enough evidence to tell whether the pattern is true for all values of x? Explain.

In 20–22, tell whether the pattern $x^5 \cdot x^2 = 8x^4$ is true for the given instances.

20. $x = 2$

21. $x = 3$

22. $x = 4$

23. Is the pattern above true for all values of x?

In 24–26, tell whether the pattern $\sqrt{(2x^2)(4y^2)} = 2xy\sqrt{2}$ is true for the given instances.

24. $x = 1$ and $y = 2$

25. $x = 2$ and $y = 3$

26. $x = 3$ and $y = 4$

27. Is there enough evidence to tell whether the pattern above is true for all nonzero values of x and y? Explain.

In 28–30, find a counterexample for the pattern.

28. $(3x^3)^2 = 36x^4$

29. $\frac{5x^5}{x^2} = 5x^2$

30. $\sqrt{16m^5} = 4m^3$