

GUIDED PRACTICE

Multiply. Simplify your answer.

SEE EXAMPLE 1
p. 898

1. $\frac{4hj^2}{10j^3} \cdot \frac{3h^3k}{h^3k^3}$

2. $\frac{4y}{x^5} \cdot \frac{2yz^2}{9x^2}$

3. $\frac{x-2}{x+3} \cdot \frac{4x+12}{6}$

4. $\frac{ab}{c} \cdot \frac{2a^2}{3c}$

5. $\frac{7c^4d}{10c} \cdot \frac{5a}{21c^3d}$

6. $\frac{12p^2q}{5p} \cdot \frac{15p^4q^3}{12q}$

SEE EXAMPLE 2
p. 899

7. $\frac{12}{4y+8}(y^2-4)$

8. $\frac{x+2}{6x^2}(5x+10)$

9. $\frac{3m}{6m+18}(m^2-7m-30)$

10. $\frac{4p}{8p+16}(p^2-5p-14)$

11. $\frac{a^2}{a}(a^2+10a+25)$

12. $\frac{-c}{4c+4}(c^2-c-2)$

SEE EXAMPLE 3
p. 899

13. $\frac{a^2+6ab}{b} \cdot \frac{5+3a}{3a^2b+5ab}$

14. $\frac{x^2+5x+4}{x-4} \cdot \frac{x^2-2x-8}{x^2+6x+8}$

15. $\frac{j-1}{j^2-4j+3} \cdot \frac{j^2-5j+6}{2j-4}$

16. $\frac{p^3+4pq}{p} \cdot \frac{6q^3-8}{2q}$

17. $\frac{r^2+15r+14}{r^2-16} \cdot \frac{2r+8}{r+1}$

18. $\frac{y-8}{y^2-1} \cdot \frac{y+2}{y^2-49}$

SEE EXAMPLE 4
p. 900

Divide. Simplify your answer.

19. $\frac{3a^4b}{2a^2c^3} \div \frac{12a^2c}{8c^4}$

20. $\frac{2m^3+2m}{m^2-2m} \div \frac{4m^2+4}{m-1}$

21. $\frac{x^2+4x-5}{3x-3} \div (x^2-25)$

SEE EXAMPLE 5
p. 901

22. **Probability** While playing a game, Rachel pulls two tiles out of a bag without looking and without replacing the first tile. The bag has two colors of tiles—black and white. There are 10 more white tiles than black tiles.

- Write and simplify an expression that represents the probability that Rachel will pick a black tile, then a white tile.
- What is the probability that Rachel pulls a black tile and then a white tile if there are 5 black tiles in the bag before her first pick?

PRACTICE AND PROBLEM SOLVING

Multiply. Simplify your answer.

23. $\frac{p^6q^2}{7r^3} \cdot \frac{-3p^2}{r}$

24. $\frac{3r^2t}{6st^3} \cdot \frac{2r^2s^3t^2}{8r^4s^2}$

25. $\frac{10}{y+5} \cdot \frac{y+2}{3}$

26. $\frac{3}{2a+6}(a^2+4a+3)$

27. $\frac{4m^2-8m}{m^2+6m-16}(m^2+7m-8)$

28. $\frac{x}{2x^2-12x+18}(2x^2-4x-6)$

29. $\frac{6n^2+18n}{n^2+9n+8} \cdot \frac{n^2-1}{2n+6}$

30. $\frac{3a^2b}{5a^3+10a^2b} \cdot \frac{2a+4b}{6a^3b+6a^2b^2}$

31. $\frac{t^2-100}{5t+50} \cdot \frac{5}{t-10}$

Divide. Simplify your answer.

32. $\frac{6j^2k^5}{5j} \div \frac{4j^3k^3}{3j}$

33. $\frac{a-4}{a^2} \div (8a-2a^2)$

34. $\frac{x^2-9}{x^2+6x+9} \div \frac{4x^2-12x}{16x}$

Independent Practice

For Exercises	See Example
23–25	1
26–28	2
29–31	3
32–34	4
35	5

Extra Practice

Skills Practice p. S27
 Application Practice p. S39