

Lesson 3 Skills Practice

Multiply and Divide Monomials

Simplify. Express using exponents.

1. $5^9 \cdot 5^3$

5^{12}

2. $3^8 \cdot 3$

3^9

3. $c \cdot c^6$

c^7

4. $m^5 \cdot m^2$

m^7

5. $3x \cdot 4x^4$

$12x^5$

6. $(2h^7)(7h)$

$14h^8$

7. $-5d^6(8d^6)$

$-40d^{12}$

8. $(6k^5)(-k^4)$

$-6k^9$

9. $(-w)(-10w^3)$

$10w^4$

10. $-7z^4(-3z^8)$

$21z^{12}$

11. $bc^3(b^2c)$

b^3c^4

12. $3a^4 \cdot 6a^2$

$18a^6$

13. $3m^3n^2(8mn^3)$

$24m^4n^5$

14. $7t^5(-6t^5)$

$-42t^{10}$

15. $(3ab^2)(a^2c^5)$

$3a^3b^2c^5$

16. $(9p^4)(-8p^2)$

$-72p^6$

17. $\frac{2^9}{2^3}$

2^6

18. $\frac{3^8}{3^4}$

3^4

19. $\frac{5^9}{5^2}$

5^7

20. $\frac{8^7}{8}$

8^6

21. $\frac{b^{12}}{b^5}$

b^7

22. $\frac{12n^5}{4n^2}$

$3n^3$

23. $\frac{14m^3}{7m^2}$

$2m$

24. $\frac{9r^8}{3r^4}$

$3r^4$

25. $\frac{24t^9}{6t^3}$

$4t^6$

26. $\frac{18y^6}{2y}$

$9y^5$

27. $\frac{a^4c^6}{a^2c}$

a^2c^5

28. $\frac{5^{10}}{5^2}$

5^8

Simplify.

29. $\frac{4^8 \cdot 5^3 \cdot 7^6}{4^6 \cdot 5^2 \cdot 7^5} \cdot \mathbf{560}$

30. $\frac{(-2)^9 \cdot (-3)^7 \cdot 4^3}{(-2)^5 \cdot (-3)^5 \cdot 4^1} \cdot \mathbf{2,304}$

31. $\frac{3^{10} \cdot (-6)^5}{3^7 \cdot (-6)^2} \cdot \mathbf{-5,832}$

32. $\frac{9^8 \cdot 10^{12}}{9^6 \cdot 10^6} \cdot \mathbf{81,000,000}$