

Practice Worksheet 4-9**Multiplying Powers****Find each product.**

1. $2^4 \cdot 2^5$
2. $10^3 \cdot 10^3$
3. $6^2 \cdot 6^4 \cdot 6$
4. $x^4 \cdot x^2 \cdot x^5$
5. $k \cdot k^6 \cdot k^3$
6. $e \cdot e^5 \cdot e^7$
7. $(3x^2)(-2xy)$
8. $x \cdot y \cdot z \cdot x \cdot y \cdot x \cdot z$
9. $(-2)(5kp^2)(k^2p)$
10. $(4xyz)(-10x^3y^2)$
11. $(x^2y)(-4x^6y^3)$
12. $(-5a^2m^7)(-3a^5m)$
13. $(-x^2z)(-xyz)$
14. $(-2n^2)(y^4)(-3n)$
15. $4a \cdot 3b \cdot 7c^2$
16. $(9a^3)(-4ab^3)$
17. $(\frac{1}{2}a^4)(6a^3)$
18. $(\frac{2}{3}b^3)(9b^2)$
19. $x^3(x^4y^2)$
20. $(-5r^2s)(-3rs^4)$
21. $(a^2b^2)(a^3b)$
22. $(2n^3)(-6n^4)$
23. $5wz^2 \cdot 8w^4z^3$
24. $(c^2d)(-10c^3d)$
25. $(3h^2)(-2h^3)(-h)$
26. $(14rt)(5r)(t^2)$
27. $(m^3p^2)(-2mp^2)(mp)$
28. $(-w^2z)(-wz)(5z^3)$

Practice Worksheet 4-10**Dividing Powers**

Find each quotient.

1. $\frac{12a^2b^3}{6a^2b}$

2. $\frac{-14ab^2c}{21a^2bc^2}$

3. $\frac{x^4y^3}{x^2y^2}$

4. $\frac{m^3n^4}{m^5n^3}$

5. $\frac{c^3d^2}{c^8d^4}$

6. $\frac{15a^2c^3}{-3ac^4}$

7. $\frac{3x^3}{12x^4}$

8. $\frac{6x^2}{16y^3}$

9. $\frac{4p^2q^3}{12pq}$

10. $\frac{3ab}{15a^2b^3}$

11. $\frac{-3r^2s^5}{-12r^3s^6}$

12. $\frac{7m^3n^{12}}{15mn^8}$

13. $\frac{-13p^4q^3}{26p^5q^7}$

14. $\frac{12a^4m^3}{16a^3m^8}$

15. $\frac{6q^3v^3}{18q^2v^4}$

16. $\frac{-5v^4z^3}{-12v^2z^5}$

17. $\frac{-11a^2p^3}{22a^8p}$

18. $\frac{80p^2t^2}{4p^2t^4}$

19. $\frac{9u^2z^3}{-12u^3z^2}$

20. $\frac{5a^2}{10ab^2}$

21. $\frac{5a^4c^2}{15a^3c^6}$

22. $\frac{f^5g^2}{f^3g^5}$

23. $\frac{12x^3y^2}{18x^4y^3}$

24. $\frac{-80a^3b^2}{12ab^2}$

25. $\frac{10m^2n^2}{15m^4n}$

26. $\frac{3n^3z^2}{4n^3z^3}$

27. $\frac{5p^3q^2}{-15p^2q^3}$

28. $\frac{x^4y^7}{x^3y^3}$

29. $\frac{12abc}{15a^2bc^3}$

30. $\frac{9a^2b^4}{18a^3b^5}$