

Practice 8-5**Division Properties of Exponents**.....
Simplify each expression. Circle your answer.

1. $\frac{c^{15}}{c^9}$

2. $\left(\frac{x^3y^{-2}}{z^{-5}}\right)^{-4}$

3. $\frac{x^7y^9z^3}{x^4y^7z^8}$

4. $\left(\frac{a^2}{b^3}\right)^5$

5. $\frac{a^6b^{-5}}{a^{-2}b^7}$

6. $\frac{7^{-4}}{7^{-7}}$

7. $\frac{a^7b^6}{a^5b}$

8. $\left(\frac{a^2b^{-4}}{b^2}\right)^5$

9. $\frac{m^6}{m^{10}}$

10. $\left(\frac{2^3m^4n^{-1}}{p^2}\right)^0$

11. $\left(\frac{s^{-4}}{t^{-1}}\right)^{-2}$

12. $\left(\frac{2a^3b^{-2}}{c^3}\right)^5$

13. $\left(\frac{x^{-3}y}{xz^{-4}}\right)^{-2}$

14. $\frac{h^{-13}}{h^{-8}}$

15. $\frac{4^6}{4^8}$

16. $\left(\frac{1}{3}\right)^3$

17. $\frac{x^5y^3}{x^2y^9}$

18. $\left(\frac{m^{-3}n^4}{n^{-2}}\right)^4$

19. $\frac{4^{-1}}{4^2}$

20. $\left(\frac{a^8b^{11}}{a^6}\right)^5$

21. $\frac{n^9}{n^{15}}$

22. $\left(\frac{r^3s^{-1}}{r^2s^6}\right)^{-1}$

23. $\frac{n^{-8}}{n^4}$

24. $\frac{m^8n^3}{m^{10}n^5}$

Simplify each quotient. Write each answer in scientific notation.

25. $\frac{9.35 \times 10^{-3}}{3.71 \times 10^{-5}}$

26. $\frac{495 \text{ billion}}{23.9 \text{ million}}$

27. $\frac{8 \times 10^9}{4 \times 10^5}$

28. $\frac{8.19 \times 10^7}{4.76 \times 10^{-2}}$

29. $\frac{65 \text{ million}}{19.5 \text{ billion}}$

30. $\frac{4.9 \times 10^{12}}{7 \times 10^3}$