

Exponent rules worksheet

Simplify and evaluate when possible.

1. $8^3 \times 8^4 = \underline{\hspace{2cm}}$	13. $(4^3e^2f^7)^0 = \underline{\hspace{2cm}}$	25. $(f^3g^5)^4(fg^2)^4 = \underline{\hspace{2cm}}$
2. $z^{15} \div z^9 = \underline{\hspace{2cm}}$	14. $2^{-2}x = \underline{\hspace{2cm}}$	26. $(k^4m/k^2m^3)^3 = \underline{\hspace{2cm}}$
3. $(x^4)^5 = \underline{\hspace{2cm}}$	15. $4x^2 \times 2x^3 = \underline{\hspace{2cm}}$	27. $x^2y^3z^6/x^2y^3z^6 = \underline{\hspace{2cm}}$
4. $(de^2)^7 = \underline{\hspace{2cm}}$	16. $12x^6/3x^3 = \underline{\hspace{2cm}}$	28. $d^{-2}/d^{-9} = \underline{\hspace{2cm}}$
5. $(b^8/c^3)^3 = \underline{\hspace{2cm}}$	17. $-(2^3)^3 = \underline{\hspace{2cm}}$	29. $2f^2(7f^5) = \underline{\hspace{2cm}}$
6. $(x^9)^0 = \underline{\hspace{2cm}}$	18. $(3^2y^5z^4)^2 = \underline{\hspace{2cm}}$	30. $36i^2j^4/6i^5j^2 = \underline{\hspace{2cm}}$
7. $g^{-5} = \underline{\hspace{2cm}}$	19. $(16f^3g^5/2f^2g^2)^3 = \underline{\hspace{2cm}}$	31. $(3^{-3})^2 = \underline{\hspace{2cm}}$
8. $y^4 \times y \times y^3 = \underline{\hspace{2cm}}$	20. $c^7/c^7 = \underline{\hspace{2cm}}$	32. $(4x^2y)^4(2^2xy^2)^2 = \underline{\hspace{2cm}}$
9. $6^7 \div 6^5 = \underline{\hspace{2cm}}$	21. $6k^3/k^{-4} = \underline{\hspace{2cm}}$	33. $(9i^2j^5/3i^4j)^2 = \underline{\hspace{2cm}}$
10. $(4^2)^3 = \underline{\hspace{2cm}}$	22. $(6a^2)(3a^3) = \underline{\hspace{2cm}}$	34. $[(25a^2b^6c^9/5b^3c^4)^{-2}(7c^4d^6)^2]^0 = \underline{\hspace{2cm}}$
11. $(5k^6)^3 = \underline{\hspace{2cm}}$	23. $5c^4/25c = \underline{\hspace{2cm}}$	35. $20e^2f^5g^7/5e^{-4}fg^5 = \underline{\hspace{2cm}}$
12. $(3r^2/5s^4)^2 = \underline{\hspace{2cm}}$	24. $(y^4)^{-2} = \underline{\hspace{2cm}}$	

36. The objective lens of a microscope can magnify an object 10^3 times, and the eyepiece can further magnify an object 10^2 times. What is the maximum magnification on the microscope?

37. There are 4×10^{13} cells in the average person. There are 7×10^9 people in the world. How many cells do all humans have together? Express the answer as a power.