

Algebra 1
Section 6.1 Worksheet #3

Name _____

In 1 – 17, simplify.

1. $x^3 \cdot x^4 \cdot x^5$	2. $(x^3y)^2$	3. $\frac{4x^5y^2}{2x^3y^4}$
4. $(5a^2b)^0$	5. $3x^5y^{-4}$	6. $\frac{x^{-8}}{5y^{-7}}$
7. $\left(\frac{a^2}{b^3}\right)^5$	8. $\left(\frac{x}{7}\right)^{-2}$	9. $\frac{(p^2)^3}{(p^4)^2}$
10. $\frac{2k^3 \cdot k^2}{k^{-3}}$	11. $\frac{2h^3j^{-3}k^4}{3jk}$	12. $2x^3y^{-3} \cdot 2x^{-1}y^3$
13. $(x^{-2}x^{-3})^4$	14. $(4r^0)^4$	15. $\frac{(2x^3z^2)^3}{x^3y^4z^2 \cdot x^{-4}z^3}$
16. $\frac{5a^6b^2}{2a^3b^4} \cdot \frac{4ab^4}{3a^4b^3}$	17. $\left(\frac{6x^7y}{x^3y^4}\right)^2$	

In 18 - 21, write each number in scientific notation.

18. 518,000,000	19. 0.000456
20. 0.023	21. 50,200

In 22 - 25, write each number in decimal notation.

22. 3.12×10^5	23. 2.9×10^{-3}
24. 8×10^{11}	25. 1.962×10^{-2}

26. Why is 52.63×10^{15} not in scientific notation?

Write each result in scientific notation and decimal notation.

27. $(4.3 \times 10^3) \cdot (6.5 \times 10^{-5})$ scientific notation _____ decimal notation _____	28. $\frac{4.3 \times 10^3}{2.5 \times 10^{-4}}$ scientific notation _____ decimal notation _____
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