

Algebra 1
Review Ch. 7
Quiz 7.3-7.4 today
MCT 7.1-7.4 is Tues.

MCT odds

7-4 Scientific Notation

Express each number in scientific notation.

39. 2,300,000

40. 0.0000543

Express each number in standard form.

20. 2.9×10^{-5}

21. 9.1×10^6

Evaluate each product or quotient. Express the results in scientific notation.

22. $(2.5 \times 10^3)(3 \times 10^4)$

23. $\frac{8.8 \times 10^2}{4 \times 10^{-4}}$

33. $256^{\frac{3}{4}}$

34. $32^{\frac{2}{5}}$

Solve each equation.

37. $6^x = 7776$

38. $4^{4x-1} = 32$

7-1 Multiplication Properties of Exponents

Simplify each expression.

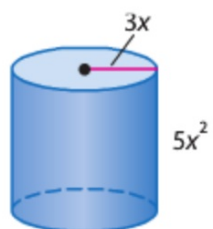
11. $x \cdot x^3 \cdot x^5$

12. $(2xy)(-3x^2y^5)$

17. $(2x^2)^3(x^3)^3$

18. $\frac{1}{2}(2x^3)^3$

19. **GEOMETRY** Use the formula $V = \pi r^2 h$ to find the volume of the cylinder.



7-2 Division Properties of Exponents

Simplify each expression. Assume that no denominator equals zero.

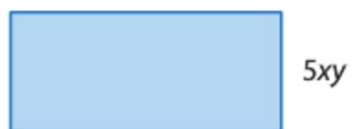
20. $\frac{(3x)^0}{2a}$

21. $\left(\frac{3xy^3}{2z}\right)^3$

$$26. \left(\frac{6xy^{11}z^9}{48x^6yz^{-7}} \right)^0$$

$$27. \left(\frac{12}{2} \right) \left(\frac{x}{y^5} \right) \left(\frac{y^4}{x^4} \right)$$

28. **GEOMETRY** The area of a rectangle is $25x^2y^4$ square feet. The width of the rectangle is $5xy$ feet. What is the length of the rectangle?



7-3 Rational Exponents

Simplify.

29. $\sqrt[3]{343}$

30. $\sqrt[6]{729}$