Algebra 1
Review Ch. 7

MCT 7.1-7.4 is Fri.
whiteboards

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7-4 Scientific Notation

Express each number in scientific notation.

39. 2,300,000. (+6 / −6)

40. 0.0000543 (+5 / −5)

2.3×10^{6}

5.43×10^{-5}

Express each number in standard form.

20. 2.9×10^{-5} .000029

21. 9.1×10^{6}

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

22. $(2.5 \times 10^3)(3 \times 10^4)$ 7.5×10^7

23. $\dfrac{8.8 \times 10^2}{4 \times 10^{-4}}$ 2.2×10^6

$.57 \times 10^{3}$ $+1$ -1

5.7×10^2

$\frac{1}{6}$

$\frac{1}{81}$

$8^{\frac{2}{3}} = 4$

$\sqrt[3]{8}$

$? = 2$

$?^3 = 8$

MCQ

P. 421

1 - 7

odds

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

$\sqrt[4]{256}$

$7^4 = 256$

4^3

$= 64$

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

$\left(\sqrt[5]{32}\right)^2 = 2 \cdot 2 = 4$

$2^5 = 32$

5

$27^{\frac{1}{3}}$ $\sqrt[3]{27}$

$3^5 = 243$

Solve each equation.

37. $6^x = 7776$

$6^x = 6^5$

$x = 5$

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

$(2^2)^{4x-1} = 2^5$

$8x - 2 = 5$

$+2 \quad +2$

$\frac{8x}{8} = \frac{7}{8}$

7-1 Multiplication Properties of Exponents

Simplify each expression.

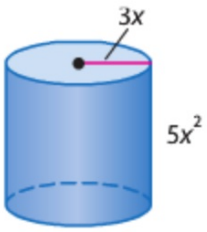
11. $x \cdot x^3 \cdot x^5$

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.

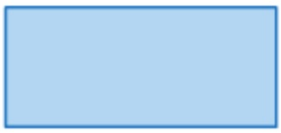
20. $\dfrac{(3x)^0}{2a}$

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

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

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. $\sqrt[6]{729}$