

Algebra 1  
Review Ch. 7  
Quiz 7.3-7.4 Friday  
MCT 7.1-7.4 is Monday  
whiteboards

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

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

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

$2.2 \times 10^{-6}$

2,200,000

~~$7.5 \times 10^3$~~   $7.5 \times 10^4$   $\frac{1}{-1}$

13.  $256^{\frac{3}{4}}$

$$\begin{array}{c} \sqrt[4]{256} \\ \downarrow \\ (4)^3 \\ 64 \end{array}$$

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

$$\begin{array}{c} \sqrt[5]{32} \\ \downarrow \\ (2)^2 \\ 4 \end{array}$$

Solve each equation.

37.  $6^x = 7776$

$$6^x = 6^5$$

$$x = 5$$

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

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

$$2^{8x-2} = 2^5$$

$$8x - 2 = 5$$

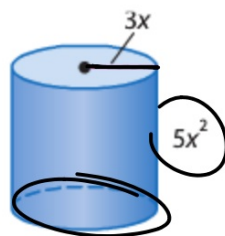
$$+2 \quad +2$$

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$$8x = 7$$

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

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

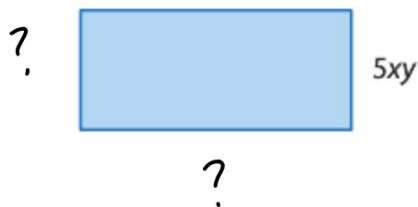


$$V = B \cdot h$$

$$V = \pi r^2 h$$

$$\begin{aligned} V &= \pi (3x)(3x) \cdot 5x^2 \\ &= \underline{45\pi x^4} \end{aligned}$$

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?



$$A = ( \quad )$$

$$\frac{25x^2y^4}{5xy} = \left( \frac{?}{5xy} \right) (5xy)$$

$$\frac{25x^2y^4}{5xy} = 5x^3y^3$$

## 7-3 Rational Exponents

Simplify.

29.  $\sqrt[3]{343} = 7$

$$7^3$$

$$\sqrt{7^3} = \sqrt{343}$$

30.  $\sqrt[6]{729} = 3$

$$7^6$$

$$853 \times 10^4 \begin{array}{c} +2 \\ -2 \end{array}$$

$$8.53 \times 10^6$$

$$8,530,000$$