

**Daily Agenda**

Learning Target: I can use the properties to simplify exponents.

Find new seat  
Complete WS with group (no calc) 20 min

**Homework**  
7.1 Worksheet

Make each day your masterpiece.  
-John Wooden

Nov 15-8:24 PM

**WS Answers**

1. $-6x^9$	14. 2
2. $4x^8$	15. 4
3. $-8x^9$	16. 10
4. -9	17. 2
5. 9	18. 4
6. $6.25x^4y^{15}$	19. 3
7. $1/x$	20. Looking for what # raised to denominator = base.
8. $-1/100$	21. .5
9. $y^3/(125x^2)$	22. x
10. $x^2/(5y^3)$	23. $x^{2/3}$
11. $1/(4x^2)$	24. $x/3$
12. 1	25. 9
13. $(x^3y^3)/(-125)$	

Oct 18-7:06 AM

**7.1 Properties of Exponents**

$5^3$       5 is base  
              3 is exponent  
               $5^3$  is power

$-3^2 = -9$   
 $(-3)^2 = 9$

When solving, remember order of operations

Sep 15-10:27 PM

**Properties of Exponents**

$x^a \cdot x^b = x^{a+b}$        $\frac{x^a}{x^b} = x^{a-b}$

$(xy)^a = x^a y^a$        $\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$

$(x^a)^b = x^{a \cdot b}$

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**Simplify**

- $2x^4 \rightarrow 2x^4$
- $(2x)^4 \rightarrow 16x^4$
- $-2x^4 \rightarrow -2x^4$
- $(-2x)^4 \rightarrow 16x^4$

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**Simplify**

- $(4-2)^3$
- $4-2^3$
- $(4 \div 2)^3$
- $4 \div 2^3$

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$$2 \cdot 3^4 = 2 \cdot 81 = 162$$

$$\frac{(3x)^4}{12x^9} = \frac{3^4 x^4}{12x^9} = \frac{81x^4}{12x^9} = \frac{27x^4}{4x^9} = \frac{27x^{-5}}{4}$$

$$(4x^3)^2 = 16x^6$$

$$= \frac{27}{4x^5}$$

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$$(3x)(2x)^3 = 3x \cdot 8x^3 = 24x^4$$

$$(3x)(2x)(2x)(2x)$$

$$\frac{(2x^2)^5}{8y^7} = \frac{32x^{10}}{8y^7} = \frac{4x^{10}}{y^7}$$

$$-(-5)^3 = -(-125) = 125$$

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$$\frac{3 \cdot 2^{1734} \cdot x^{\sqrt{3}+1}}{4 \cdot 2^{1731} \cdot x^{\sqrt{3}-2}} \cdot \frac{(\sqrt{3}+1) - (\sqrt{3}-2)}{3}$$

$$\frac{3 \cdot 2^3 \cdot x^3}{4} = \frac{24x^3}{4} = 6x^3$$

Oct 14-9:57 AM