Name/Per.:_____

Algebra 1 Chapter 7 REVIEW

T 7-1: I can multiply monomials using the properties of exponents and simplify expressions.

Simplify the following expressions. *No Negative Exponents!!*

1. $11x^7 \cdot 9x^{12} =$

2. $(-7x^4)(-9x^8) =$

3. $(5x^7y^9)^3 =$

4. $-a^4x^4z \cdot a(-x)^4z^{23} =$

5. $(2gh^4)^3((-2g^4h)^3)^2 =$

6. $3(7d^2)^4 =$

7. $\left(\frac{a^2}{b^4}\right)^3 =$

8. $\left(\frac{5}{7}\right)^3 =$

9. Is this equation true or false? If false, change the RIGHT side to make it true. Explain the mistake that was made.
   $(5x^7y^9)^3 = 125x^{10}y^{12}$

10. Is this equation true or false? If false, change the RIGHT side to make it true. Explain the mistake that was made.
    $(6k^7)^3 = 18k^{21}$

Target 7-2: I can divide monomials using the properties of exponents and simplify expressions.

Simplify the following expressions. *No Negative Exponents!!*

1. $\frac{h^5}{h^{11}} =$

2. $\frac{x^7}{x^2} =$

3. $\frac{35m^{15}}{5m} =$

4. $\frac{4y^2}{12y^3} =$

5. $\frac{8a^5b^8}{40a^7b^3} =$

6. $\frac{-8x^{12}y^3}{10y^{10}x^6} =$

7. $\left(\frac{3x^9y^5}{2y^{11}x^{12}}\right)^2 =$

8. $\left(\frac{4x^2y^7}{3xy^5}\right)^3 =$

9. Is this equation true or false? If false, change the RIGHT side to make it true. Explain the mistake that was made.

$$\frac{24xy^4}{9x^8y^2} = \frac{15y^2}{x^7}$$

10. Is this equation true or false? If false, change the RIGHT side to make it true. Explain the mistake that was made.

$$\frac{15x^6y^3}{3x^2y^9} = \frac{5x^3}{y^3}$$

T7-3: I can use all properties of exponents to solve exponents.

Simplify the following expressions. *No Negative Exponents!!*

1. $\left(\frac{2x^{-4}}{3y^3}\right)^4 =$	2. $\left(\frac{7x^3y^5}{6x^{-9}y^{-3}}\right)^{-2} =$
3. $\left(\frac{1}{z}\right)^{-3} =$	4. $(5235x^6y^{88}z^{-32})^0 =$
5. $17x^0 =$	6. $-6x^{-7} =$
7. $\frac{(2pm^{-1}q^0)^{-4}2m^{-1}p^3}{2pq^{21}}$	8. $\frac{(4c^3d^8)^{-2}(6c^7d^4)}{12c^{12}d^{11}} =$
9. Is this equation true or false? If false, change the RIGHT side to make it true. Explain the mistake that was made. $7(3x^2)^{-1} = -21x^2$	10. Is this equation true or false? If false, change the RIGHT side to make it true. Explain the mistake that was made. $\left(\frac{2x^3}{-3y^5}\right)^{-2} = \frac{-4y^{10}}{6x^6}$

T 7-4: I can evaluate, rewrite and solve expressions involving rational exponents

Write the following in radical form.

1. $21z^{\frac{1}{2}} =$ _____

2. $(7ab)^{\frac{1}{3}} =$ _____

3. $13(ab)^{\frac{5}{2}} =$ _____

Write the following in exponential form.

4. $\sqrt[5]{13} =$ _____

5. $\left(\sqrt[5]{17x}\right)^{3} =$ _____

6. $3\sqrt{x} =$ _____

Evaluate the following rational exponents.

7. $\left(\frac{1}{81}\right)^{\frac{1}{4}} =$ _____

8. $\sqrt[5]{1024} =$ _____

9. $512^{\frac{2}{3}} =$ _____

10. $\left(\frac{32}{1024}\right)^{\frac{1}{5}} =$ _____

11. $3125^{\frac{4}{5}} =$ _____

12. $\sqrt[4]{1296} =$ _____

13. $5^{3-2x} = 5^{-x}$

14. $3^{2a} = 3^{-a}$

15. $4^{x-1} = 1024$

16. $6^{x-1} = 1296$