03/06/2025 – Laws of Exponents

Review of Unit 10 for Grade 7 and Unit 8 for Grade 8 (7A & PreAlgebra) – Fun theme: Superhero

Questions to follow along with show. Watch: Math Homework Hotline

1) Evaluate the expression. (MA.7.NSO.1.1)

$$(5^2)(5^5)$$

2) Which of the following expressions are equivalent to $\frac{1}{2^3}$? (MA.8.NSO.1.3)

Expression	Equivalent	Not Equivalent
$(2)^{-3}$		
$2^6 \cdot 2^{-2}$		
$2^{-6} \cdot 2^3$		
$2^{-4} \cdot 2$		
$(2^2)^3$		

3) Simplify the expression. (MA.8.AR.1.1)

$$\frac{16xy^5}{320x^4y^{-3}}$$

4) Find the product of the expression. (MA.8.AR.1.2)

$$5.2h(2.1 + 3.8h)$$

5) For the expression shown, determine an equivalent expression written as a common factor multiplied by the sum of two algebraic expressions. (MA.8.AR.1.3)

$$18x^4 + 9x^5y^2$$

6) Write the number in standard form or scientific notation, according to what is given. (MA.8.NSO.1.4)

Standard Form	Scientific Notation
0.0012	
345,067	
	2.18×10^{-6}
	7.4009437×10^8

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7) Superman had 0.0035 pounds of chocolate. Spider Man had 3.5×10^2 pounds of chocolate. How many times more pounds of chocolate does Spider Man have compared to Superman? (MA.8.NSO.1.4)

8) What is the value of the expression in scientific notation? (MA.8.NSO.1.5)

a) $(1.3 \times 10^3) + (3.4 \times 10^5)$

b) $(2.8 \times 10^{-4}) - (3 \times 10^{-2})$

9) What is the value of the expression in scientific notation? (MA.8.NSO.1.5)

a) $(4 \times 10^4)(3 \times 10^2)$

b) $\frac{(2.4 \times 10^2)(7.5 \times 10^4)}{4\times10^2}$

10) Superhero Flash can run at a speed of 3×10^2 miles per hour. One day, he decides to race against Superhero Speedster, who can run at a speed of 2×10^2 miles per hour. If they both start running from the same point and head towards a city 400 miles away, how much sooner will Flash reach the city compared to Speedster? (MA.8.NSO.1.6)