Name _____ Date _____

CHAPTER 8

Chapter Review Games and Activities

For use after Chapter 8

Math History

Solve the following exercises. Find the answer at the right of the page. Place the letter associated with the correct answer on the line with the exercise number to answer the following question.

Who was the first mathematician to use exponential notation the way we use it today?

Exercises	*Answers*	
1. Simplify: $x^3 \cdot x^5$	(S) 1.495×10^{11}	(B) 0
2. Write in scientific notation: 31,009,100	(R) x^8	(N) 1
3. Simplify: $(8x^4y^3)^0$	(E) 0.055	(D) 0.891
4. Simplify: $\left(\frac{x^2}{y}\right)^3$	(L) 1.055	(E) $\frac{x^6}{y^3}$
5. What is the decay factor in the model $y = 35(0.891)^t$?	(A) 3.0×10^{-5}	(P) x^{15}
6. Simplify: $-(3x^2)^4(2x)^2$	(T) $-\frac{500}{x^4y^6}$	(C) $2x^7y$
7. Write in standard form: 9.87×10^{-5}	(K) 987,000	
8. Simplify: $\frac{16x^{-2}y^4}{(2x^{-3}y)^3}$	(R) $\frac{y^{14}}{16x^6}$	
9. Evaluate: $\frac{7.5 \times 10^{-3}}{2.5 \times 10^2}$	(U) $\frac{8x^7}{y}$	
10. Simplify: $(2x^{-3}y^4)^2 \cdot (4y^{-2})^{-3}$	(E) 3.10091×10^7	
11. Simplify: $\left(-\frac{5}{x^2}\right)^3 \cdot \left(\frac{2x}{y^3}\right)^2$	(F) $\frac{x^6}{y}$	
12. What is the growth rate in the model $y = 17(1.055)^t$?	(S) 0.0000987	
13. Evaluate: $(6.5 \times 10^6)(2.3 \times 10^4)$	(E) $-324x^{10}$	

1	2	3	4

5	6	7	8	9	10	11	12	13