Algebra 1+ Name_____Hour_____

SKILLS REVIEW – EXPONENTS – MARCH 16TH – 20TH

Simplify the following:

1. (a) x^2x^3 (b) x^5x^2 (c) x^4x^4

2. (a) $2x^7 \cdot 8x^5$ (b) $\left(-4x^3\right)\left(2x^2\right)$ (c) $\left(-6x^3\right)^2$

3. (a) $\left(2^2\right)^4$ (b) $\left(x^3\right)^4$

4. (a) $\frac{2^4}{2^4}$ (b) $\frac{x^2}{x^7}$ (c) $\frac{5^6}{5^{10}}$

5. (a) $\frac{4x^7}{8x^3}$ (b) $\frac{15x^{10}}{10x^2}$ (c) $\frac{16x}{20x^3}$

6. Write without negative exponents.

(a) 5^{-3} (b) 6^{0} (c) 2^{-5}

7. Simplify the following expression. Write it in two ways, one with the use of negative exponents and one with the use of a fraction (that doesn't have negative exponents).

$\frac{x^5}{x^9}$ _____ _____

8. Consider the **exponential function** $f(x)=16(2)^x$. Find each of the following by plugging in for x.

(a) $f(0)$ (b) $f(2)$ (c) $f(-2)$

_____Multiple Choice on Next Page _____

Multiple Choice: Show your work and circle the best answer:

1. Which of the following is equivalent to $\left(3x^2y\right)\left(10x^5y^3\right)$?

   (1) $30x^{10}y^3$ (3) $13x^7y^4$

   (2) $30x^7y^4$ (4) $13x^{10}y^3$

2. The expression $\frac{5x^9}{10x^3}$ can be simplified to

   (1) $2x^6$ (3) $2x^3$

   (2) $\frac{1}{2}x^6$ (4) $\frac{1}{2}x^3$

3. Which of the following is equivalent to 2^{-3}?

   (1) -6 (3) -8

   (2) $\frac{1}{6}$ (4) $\frac{1}{8}$

4. Which of the following is equivalent to $\left(4a^5b^2\right)\left(8a^3b\right)$?

   (1) $12a^{15}b^2$ (3) $32a^8b^2$

   (2) $12a^8b^3$ (4) $32a^8b^3$