## Review for Gest \#2-Scientific Motation

Name: $\qquad$ Class: $\qquad$
Write each number in scientific notation.
1.) $45,100,00$
2.) 0.00032

Write each number in standard notation.
3.) $3.8 \times 10^{-7}$
4.) $2.15 \times 10^{5}$
5.) Write the following numbers in order from least to greatest.
$3.5 \cdot 10^{8}, 3.9 \cdot 10^{6}, 7.1 \cdot 10^{6}$
$\qquad$
$\qquad$
Explain how you know.
$\qquad$
$\qquad$
$\qquad$
6.) Multiply: $\left(3.4 \cdot 10^{8}\right) \cdot\left(4.8 \cdot 10^{13}\right)$
7.) Add: $\left(6.4 \cdot 10^{9}\right)+\left(8.2 \cdot 10^{8}\right)$
8.) Divide: $\frac{\left(1.6 \cdot 10^{8}\right)}{\left(4 \cdot 10^{11}\right)}$
9.) Subtract: $2.8 \times 10^{5}-4.1 \times 10^{3}$
10.) Which of the following is not equivalent to $2^{4} \cdot 2^{-7}$ ?
(A) $\quad 2^{-3}$
(B) $\frac{1}{2^{3}}$
(C) $\frac{1}{8}$
(D) $\frac{1}{6}$
11.) What is equivalent to $3^{5} \cdot 3^{-8}$ ?
(B) -27
(B) $-\frac{1}{27}$
(C) $\frac{1}{27}$
(D) 27
12.) A rectangular yard has a length of $4 \cdot 10^{-3}$ kilometer and a width of $6 \cdot 10^{-5}$ kilometer. Use scientific notation to express the area of the yard in square kilometers, showing each step in the process.
13.) If something grows at a rate of $8.4 \cdot 10^{-5}$ inches per year, how long will it be after it grows for $9.1 \cdot 10^{7}$ years?
14.) The SR-71 "Blackbird" one of the world's fastest airplanes. It is capable of cruising pseed of Mach 3, or three times the speed of sound. The speed of sound is approximately $7.6 \times 10^{2}$ miles per hour. How fast is the SR-71 capable of flying? Express your answer in scientific notation.
15.) Consider number $A$, which is $35,000,000$, and number $B$, which is $7,000,000$.
a) Write each number in scientific notation. Number A: Number B: $\qquad$
b) How many times larger is number $A$ than number $B$ ?
16.) About $3.16 \cdot 10^{8}$ people live in the USA. About $1.357 \cdot 10^{9}$ people live in China. How many more people live in China than the USA?

