Date _____

Mr. Tallman

Do Now

Convert the following into scientific notation.

1) 9,630,000

2) 7,320

3) 0.0000054

Convert the following into standard form.

4)
$$3.5 \times 10^7$$

1) (F F × 104)(2.0 × 105)

5)
$$2.935 \times 10^{10}$$

6)
$$9.2 \times 10^{-4}$$

Lesson #48 - Multiplying and Dividing Numbers in Scientific Notation

Numbers in Scientific Notation can be multiplied and divided using your calculators!

MAKE SURE TO INCLUDE PARENTHESIS WHEN TYPING YOUR NUMBERS INTO THE CALCULATOR. ALSO, BE CAREFUL HOW THE QUESTION WANTS THE FINAL ANSWER WRITTEN.

Multiply the following. Write your answers in scientific notation.

1) $(5.5 \times 10^{4})(2.0 \times 10^{3})$	2) (2.8 × 10°)(1.9 × 10 ⁻³)
3) (6 × 10 ⁶)(4 × 10 ⁻¹)	4) (4.11 × 105)(8.65 × 10-5)

2) $(2.0 \times 1.08)(1.0 \times 1.0-5)$

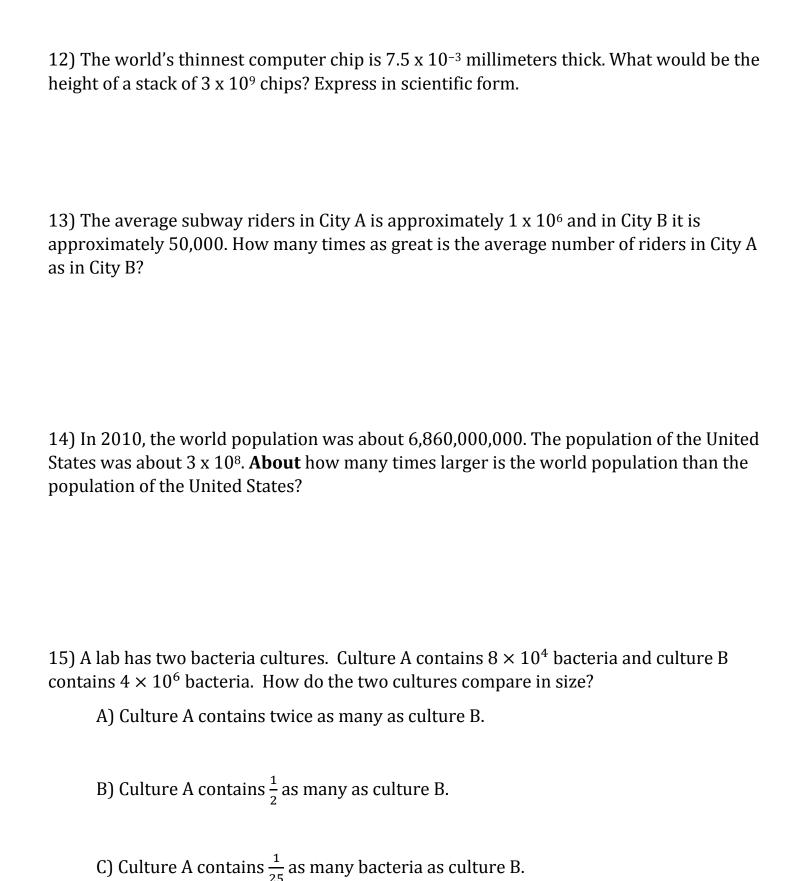
Divide the Following. Write your answers in scientific notation.

5) $\frac{2.05 \times 10^8}{8.2 \times 10^4}$	6) (3.6 x 10 ⁸) ÷ (6 x 10 ⁵)
7) (4.8 x 10 ⁷) ÷ (2 x 10 ⁻⁴)	8) (9.6 x 10 ⁷) ÷ (3 x 10 ⁵)

9) When the sun makes an orbit around the center of the Milky Way, it travels 2.025×10^4 kilometers. The orbit takes 225,000,000 years. At what rate does the sun travel in Kilometers per year? Write your answer in scientific notation.

10) Light travels at a speed of 1.86×10^5 miles per second. It takes light from the Sun about 4.8×10^3 seconds to reach Saturn. Find the approximate distance from the Sun to Saturn. Write your answer in scientific notation.

11) California, the most populous state, has approximately 4×10^7 people living in it. The population of the entire United States is approximately 3×10^8 people. About how many **times greater** is the population of the United States than the population of California? Express in standard form.



D) Culture A contains $\frac{1}{50}$ as many bacteria as culture B.