

Name .....

# Spiral Review 6

Directions: Show your work for credit.

1. What is  $8.305 \times 10^{-7}$  written in standard notation?

*Show your work*

- a. -83,050,000
- b. 0.0000008305
- c. 0.00000008305
- d. 83,050,000

2. Write the sum  $3.75 \times 10^7 + 7.1 \times 10^6$  in scientific notation.

*Show your work*

- a.  $44.6 \times 10^6$
- b.  $4.46 \times 10^7$
- c.  $1.085 \times 10^8$
- d.  $1.085 \times 10^{14}$

3. Which of the following expressions are equivalent to  $14^6$ ?

*Show your work*

\*\*\* There may be more than one choice to circle \*\*\*

Clearly circle your choices

a.  $\frac{14^{18}}{14^3}$

b.  $\frac{(14^2)^5}{14^4}$

c.  $14^2 \cdot 14^3$

d.  $(14^4)^2$

e.  $(14^6)^0$

f.  $14^{-5} \cdot 14^{11}$



4. Which of the following expressions have a value less than 1?

\*\*\* There may be more than one choice to circle \*\*\*

**Show your work**

Clearly circle your choices

a.  $\frac{4^{11}}{4^{14}}$

b.  $\frac{(3^5)^2}{3^4}$

c.  $4^{-1} \cdot 4^5$

d.  $(2^3)^{-2}$

e.  $(5^4)^2 \cdot 5^{-11}$

f.  $\frac{6^{-4} \cdot 6^6}{6^3}$

5. In 2011, the population of Canada was about  $3.435 \times 10^7$ . The population of the United States was about  $3.120 \times 10^8$ . About how much more was the population of the United States than Canada? Write your answer in scientific notation.

**Show your work**

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