

Name \_\_\_\_\_

Date \_\_\_\_\_

Aim: How can we compare and order numbers in scientific notation?

## DO NOW:

1. Which country has the greatest population?

2. Which country has the least population?

3. Order the populations from least to greatest.

4. How many times greater is the population of Russia than the population of Iceland?

Country	Population
China	$1.273 \times 10^9$
Fiji	844,000
Iceland	$2.78 \times 10^5$
Russia	142,300,000

**Write the product or quotient in scientific notation.**

5.  $(3 \times 10^{-4})(9.2 \times 10^{-7})$       6.  $\frac{56 \times 10^{10}}{2.8 \times 10^8}$       7.  $(73,000)(0.0000056)$       8.  $\frac{93,000,000}{0.0003}$

9. A blue star has a temperature between 36,000°F and 90,000°F.

a. Write the temperature range using scientific notation.

b. Is a star with temperature  $8.8 \times 10^3$  degrees Fahrenheit warmer or cooler than a blue star?

10. You fill a large water tank with  $3.4 \times 10^3$  gallons of water. About 6.1% of the water is not fresh water. How many gallons of fresh water are in the tank?

11. A gymnasium is 100 yards wide, 150 yards long, and 30 yards tall.

a. Write the dimensions in scientific notation.

b. Find the volume of the building. Write your answer in scientific notation.

c. The cooling system is designed to cool a building up to  $5.0 \times 10^5$  cubic yards. What size addition could be added to the gym without needing a new cooling system?

12. How many times greater is the radius of a basketball than the radius of a marble?



Radius =  $1.143 \times 10^1$  cm



Radius =  $5 \times 10^{-1}$  cm