

Name: _____

SCIENTIFIC NOTATION WORD PROBLEMS



Directions: Solve each word problem.

- 1.) The wavelength of blue light is 0.000078 and the wavelength of red light is 0.000063. What is the wavelength of blue light expressed in scientific notation?
- 2.) The volume of sugar produced per day at Rishi's Sugar Factory is 1,500 kg. If the factory produces sugar at the same rate every day for 30 days, what is the total volume of sugar produced in scientific notation?
- 3.) The chart below shows countries with the largest populations as of 2022.

Country	Approximate Population
India	1,429,000,000
China	1,426,000,000
United States	328,000,000
Indonesia	278,000,000
Pakistan	242,000,000

Which country's population can be expressed as 1.426×10^9 ?

- 4.) In the United States, the population was 328,200,000 people in 2020. The total health care costs for the population at that time was \$3,800,000,000,000.00. Calculate the average amount of dollars spent per person on health care in scientific notation.
- 5.) A standard microwave oven works at an energy wave frequency requirement of 3×10^3 MHz. If a new microwave design only needs $\frac{1}{3}$ of the wave frequency that standard microwave does, what would the new microwave's frequency requirement be?

ANSWER KEY

1.) 7.8×10^{-5}

2.) 4.5×10^4

3.) **China**

4.) 1.157831×10^4 **dollars per person**

5.) 1×10^3