

1. Mr. Griffin's class is studying the solar system. The circumference of the Earth at the equator is about 24,900 miles. Express this number in scientific notation.

2. The speed of light is approximately 6.71×10^8 miles per hour.
 - a. Express this number in standard form.

 - b. If light travels 6.71×10^8 miles in one hour. How many miles will it travel in 1 minute?

 - c. If it takes light 8.3 minutes to reach the Sun from the Earth, what is the distance of the Sun from the Earth?

3. A speck of dust in an electron microscope is 1.2×10^2 millimeters wide. The image is 5×10^2 times larger than the actual size. How many millimeters wide is the actual speck of dust?

4. The SR-71 "Blackbird" is one of the world's fastest airplanes. It is capable of traveling at a cruising speed of Mach 3, or three times the speed of sound. The speed of sound is approximately 7.6×10^2 miles per hour. What is Mach 3 in miles per hour? Write your answer in scientific notation.

5. The half-life of uranium-238 is 4.5×10^9 years. The half-life of uranium-234 is 2.5×10^5 years. How many times greater is the half-life of uranium-238 than that of uranium-234?

6. The state of Colorado covers about 1.04×10^5 square miles. The Indian Ocean covers about 2.808×10^7 square miles. How many times bigger than Colorado is the Indian Ocean?

7. Students at Salt Lake Community College pay 1.585×10^4 dollars for tuition. Students at George Washington University pay 4.573×10^5 dollars. How many times greater is the tuition at George Washington?

8. The population of the United State is 3×10^8 and the population of the world is 7×10^9 . How many times larger is the population of the world than the U.S.?

Geographers keep track of how many people live in different areas of the world. They are especially interested in how the populations of certain area change. The table below shows the population of different regions in 1985 and in 2005.

Place	Population	
	1985	2005
Earth	4.9×10^9	6.4×10^9
China	1.1×10^9	1.3×10^9
India	7.6×10^8	1.1×10^9
United States	2.4×10^8	3.0×10^8

9. In 2005, how many times greater than China's population is the population of the world?

10. How many more people inhabited Earth in 2005 than in 1985?

The word million came from Italian merchant Marco Polo, when during the 14th century on one of his trips to China he said that he saw mill-one people there (many thousand). Since then it is used in almost the same form in many other languages.

11. Write one million in standard form and scientific notation.

12. How long was a million days ago in hours?

13. How far is a million inches in miles? (There are 5280 feet in 1 mile.)

Bonus: McDonald's has sold more than a billion hamburgers. If it were possible to eat a hamburger every minute of every day (day and night) without stopping, how many years would it take to eat a billion hamburgers?