Number Theory Worksheet Key: Scientific Notation

Write the number(s) given in each problem using scientific notation.

1. The human eye blinks an average of 4,200,000 times a year. **4.2×10^{6}**

2. A computer processes a certain command in 15 nanoseconds. (A nanosecond is one billionth of a second.) In decimal form, this number is 0. 000 000 015.

   1.5×10^{-8}

3. There are 60,000 miles (97,000 km) in blood vessels in the human body.

   6×10^{4} mi **9.7×10^{4} km**

4. The highest temperature produced in a laboratory was 920,000,000 F (511,000,000 C) at the Tokamak Fusion Test Reactor in Princeton, NJ, USA.

   9.2×10^{8} F **5.11×10^{8} C**

5. The mass of a proton is 0.000 000 000 000 000 000 000 001 673 grams. **1.673×10^{-24} g**

6. The mass of the sun is approximately 1,989,000,000,000,000,000,000,000,000,000,000 grams.

   1.989×10^{33} g

7. The cosmos contains approximately 50,000,000,000 galaxies. **5×10^{10}**

8. A plant cell is approximately 0.00001276 meters wide. **1.276×10^{-5} m**

Write the number(s) given scientific notation in standard form.

9. The age of earth is approximately 4.5×10^{9} years. **4,500,000,000 yr**

10. The weight of one atomic mass unit (a.m.u.) is 1.66×10^{-27} kg.

    0.000000000000000000000001673 kg

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