

1. Avogadro's number is 6.022×10^{23} . Write this number in decimal notation.
2. Alpha Centauri is 39,900,000,000,000 km from Earth. Write this number in scientific notation.
3. The dimension of Planck's constant is the product of energy multiplied by time, a quantity called action. Planck's constant is often defined, therefore, as the elementary quantum of action. Its value in meter-kilogram-second units is $6.6260755 \times 10^{-34}$ joule-second. Write this number in decimal notation
4. Multiply $12,000,000,000 \times 0.000000005$ by first converting each number to scientific notation and then using the laws of exponents.
5. Divide: $\frac{1.4 \times 10^7}{7 \times 10^5}$