

Apply: Dimensional Analysis

1. Mr. Jones, the chemistry teacher has 5 classes of 26 students each. Calculate the number of laboratory reports that he will have to grade if each student completes 18 laboratory reports.
2. If a person's heart rate is 72 beats per minute, how many times does the heart beat in a day?
3. The density of gasoline is 0.68 g/cm^3 . How large a container in liters would you need to hold 7.2 kg of gasoline? (1 kg = 1000 g; 1 L = 1000 mL)
4. It is estimated that about 9.0 tons of lead from exhausts is deposited in or near highways every day in large cities. How many kg per year is this amount? (1 ton = 1000 kg)
5. The remaining storage capacity of an iPod™ is 1 gigabyte. A student wants to download a playlist consisting of 217 songs. Each song requires a storage space of approximately 3878 kilobytes. Use dimensional analysis to find if the student has enough storage space to download the entire playlist. (1024 kilobytes = 1 megabyte; 1024 megabytes = 1 gigabyte)