Using dimensional analysis, perform the following:

1. 3.50×10^{7} L = ____ kL
2. 5000 nm = ____ m
3. 95.0 kg = ____ mg
4. 2.54 cm = ____Mm
5. 1.67×10^{-12} s = ____ ms
6. 8.90×10^{8} kg = ____cg
7. 70.0 mi/h = ____m/s (1 mi = 1.61 km)
8. 100. lb = ____kg (1 kg = 2.20 lb)
9. 64.0 fluid oz = ____L (1 qt = 32 fluid oz; 1 L = 1.06 qt)
10. 58.0 °F = ____K
11. Given that the density of Al is 2.70 g/cm^3, determine the thickness of a rectangular sheet of Al that measures 18.76 cm x 35.00 cm and weighs 120.230 g.
12. Nichrome is an alloy that typically consists of 80% nickel and 20% chromium. What is the length (in cm) of a piece of 18-gauge nichrome wire if its mass is known to 0.379 g and its density is known to be 8.40 g/cm^3?
13. The cobalt-chromium chunk of metal that used to be my femoral head has a density of 8.39 g/cm^3 and a mass of 207 g. If it were a perfect sphere, what would its diameter be (in cm)?