1. [16 points] Convert the following:

1449 cm$^3$ to ft$^3$

0.0070 µg to cg

13.2 mL/cm$^2$ to L/m$^2$

2. [8 pts] The density of gasoline is 0.780 g/mL. If the gas tank of a truck holds 25.0 kg of gasoline, what is the volume of this amount, in L?

3. [6 pts] If you run at a pace of 9.2 miles per hour, how many minutes will it take you to run a 10 km race?
4. [8 pts] How much energy (in kJ) does your heart require to pump for 12.0 hours, if it has an average rate of 1.3 beats per second, and 1.1 cal is needed for 5 beats?

5. [8 pts] Temperature conversions:

Convert 500.0 K to °C. 

Convert 37.8°F to K.

\begin{align*}
1 \text{ in.} &= 2.54 \text{ cm} & 1 \text{ lb} &= 453.6 \text{ g} & 1 \text{ cm}^3 &= 1 \text{ mL} & T(\text{K}) &= T(\text{°C}) + 273.15 \\
1 \text{ mi} &= 1.609 \text{ km} & 1 \text{ cal} &= 4.184 \text{ J} & T(\text{°C}) &= \frac{5}{9}(T(\text{°F}) - 32)
\end{align*}