Basic Competence for Mechanics. Please show all work.

1) A $5x10^6$ ton meteor hurls through space and will hit the earth at 72000 km/hr… Pandemonium Ensues.
   a) Convert these units to ones that we can use.
   b) Calculate the kinetic energy of this meteor.
   c) Show how you arrived at the correct units.

2) Estimate the sin, cos, and tan of the labeled angle. No calculators allowed. Show your work and reasoning. Put your answer in decimal form.

3) Estimate the area of a solid circle of radius 3 cm. Put answer in square meters.