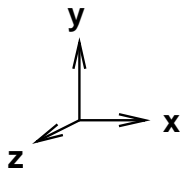
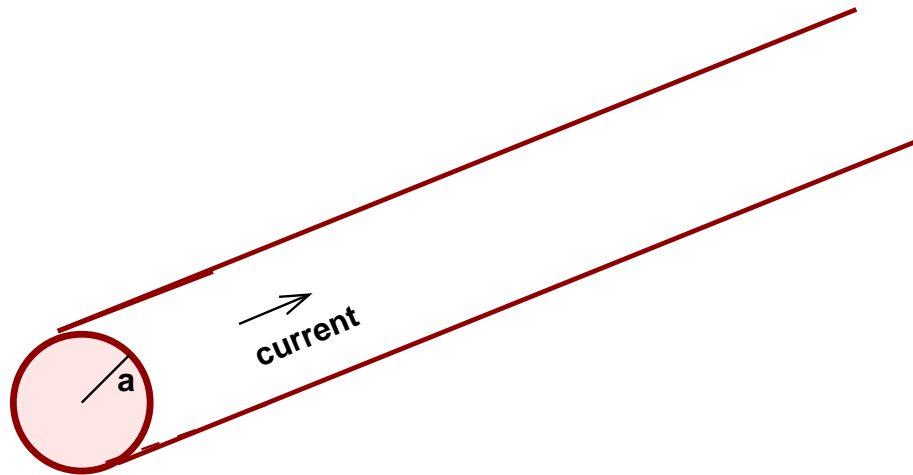


Physics 122: Practice Problem of the Day**Problem #15: Ampere's Law for a Coaxial Current Core**

Saturday February 21, 2009



You are given a *coaxial core* that carries total current I_0 as show. The radius of the core is a . Assume that the current is *uniformly distributed* throughout any cross-section of the core.

What is the total magnetic field everywhere? Indicate magnitude and “direction”.