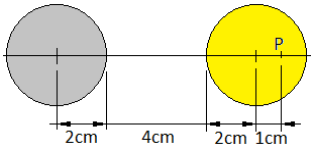
Physics II

Ampere's Law

Problem 1.- Calculate the magnitude and direction of the magnetic field produced at point P due to the currents in two long parallel conductors with radius 2cm each and separated 4cm as shown in the figure. Assume that the currents are uniformly distributed in the conductors. The current of the left conductor is 150A towards us and the one on the right conductor is 150A away from us.



Problem 2.- Calculate the magnetic field in all space, produced by the long coaxial cable whose cross section is shown in the figure. The central conductor brings a current *I* towards us, and the external conductor takes it away from us. Assume that the currents are uniformly distributed over their conductors.