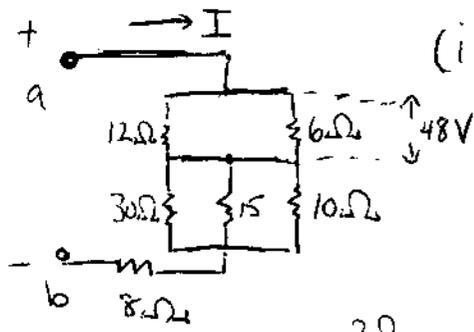
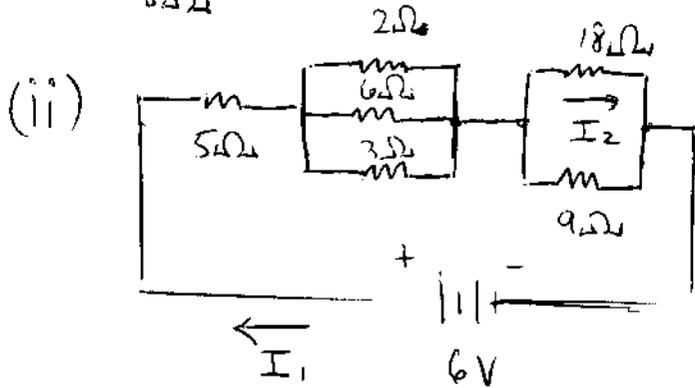


Saturday Review Session Problems

Problem 1: Kirchhoff's Laws



- (i) (a) Determine the current I
 (b) Find the potential across 8Ω resistor
 (c) Find the potential across 10Ω resistor and the potential drop from a to b .



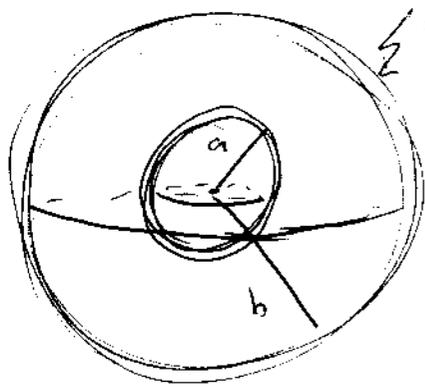
Find I_1 and I_2

Problem 2: Ampere's Law

- (i) Find $|\vec{B}|$ along the axis of the rod

- (ii) Find $|\vec{B}|$ for $a < s < b$, $s > b$

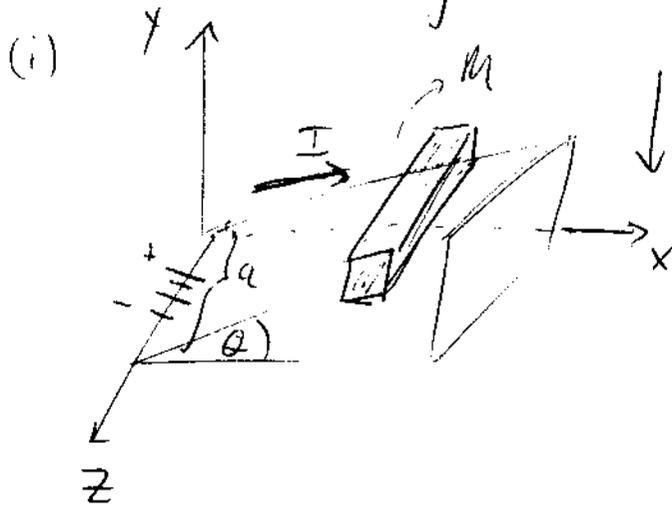
Problem 3: Spherical Capacitor



concentric
spherical (shell)
conductors

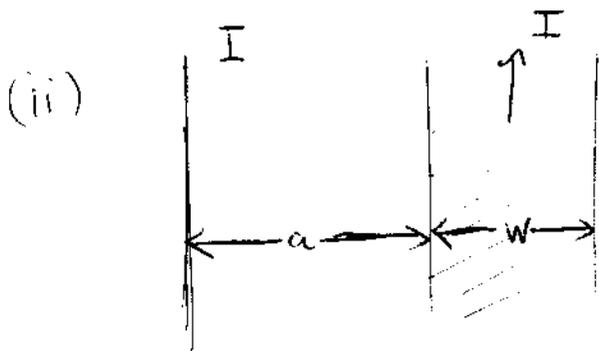
Find the capacitance for
this system

Problem 4: Magnetic Force



$$\vec{B} = -B_0 \hat{y}$$

How large must I
be if the rod remains
motionless



What is the total force per unit length
on the strip?