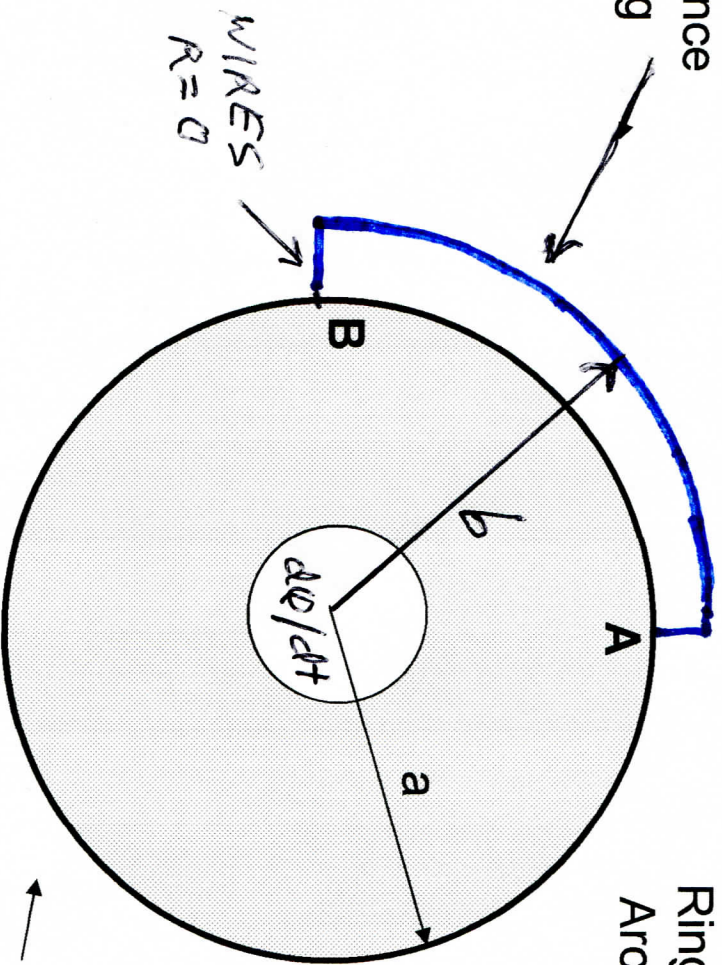


External 90 deg
arc, same resistance
/unit length as ring



Ring radius = a
Arc radius = b

Ring $R=r$ ohms

3 paths:

1. A-B inside ring, short way around
2. A-B via arc and wires
3. A-B long way around ring.

$$\text{emf} = - \frac{d\phi}{dt}$$

For all 3 paths, $U_{AB} = -3a(\text{emf})/4(3a+4b)$