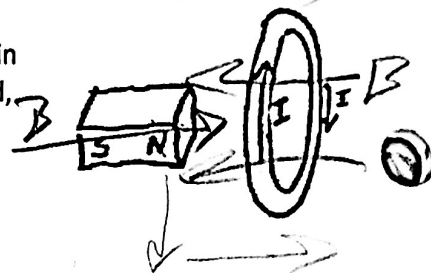
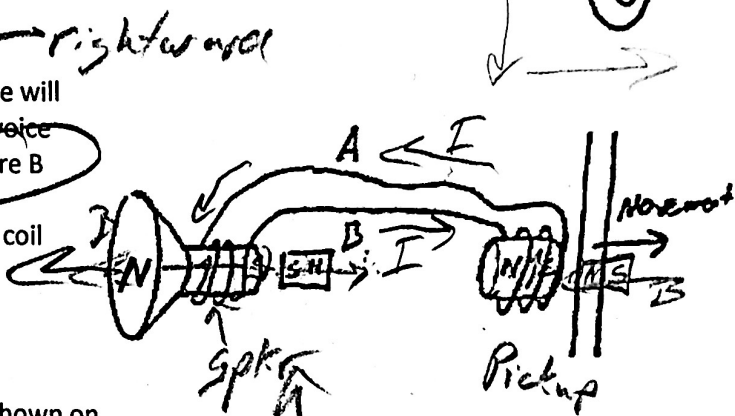


29. In what direction must the magnet be shifted in order to produce a current in the indicated direction? A. Rightward, upward, or downward b. Leftward, upward, or downward
 c. Rightward only d. Leftward only e. upward or downward



30. In the diagram on the right, through which wire will the current travel ~~leftward~~, from the speaker voice coil to the pickup? A. Wire A B. Wire B



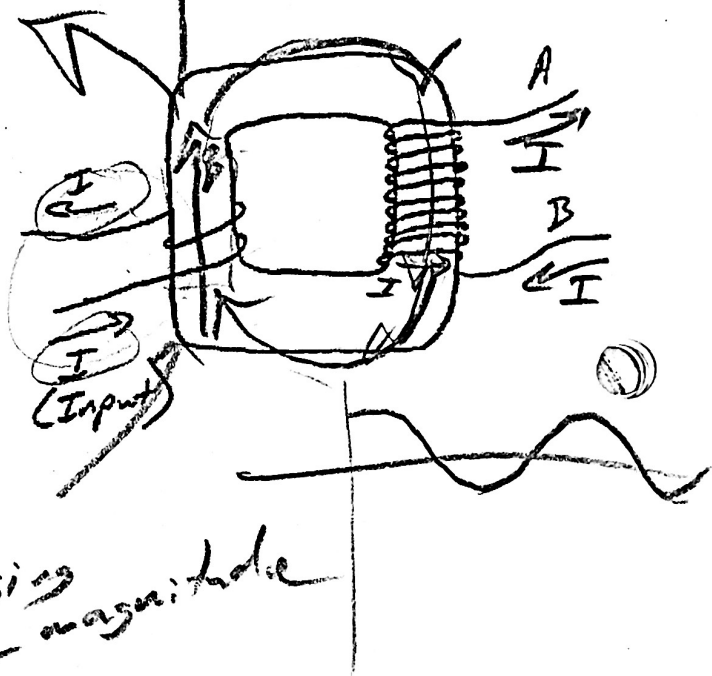
31. In the same diagram, which way will the voice coil and speaker cone be pushed by the nearby permanent magnet? A. leftward B. rightward

- 32-34. The source current entering a transformer is shown on the right. If we assume that current is decreasing...

32. Is this transformer increasing voltage or decreasing voltage? A. Increasing b. Decreasing

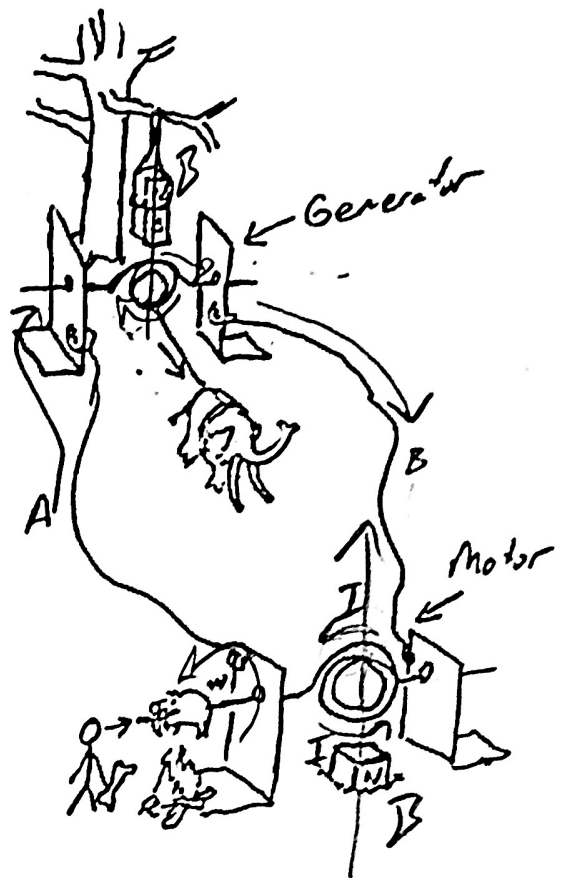
33. In terms of voltage, how much stronger is the high voltage coil, compared to the lower voltage coil? A. 2x B. 3X C. 4X D. 5X E. 6X

34. Through which of the wires in the output coil is current traveling leftward? A. Wire A B. Wire B



Assume current is presently increasing in magnitude

35-36. In their first attempt at creating a rotisserie for roasting pigs and whatnot, the cave people have set up a mammoth-powered generator to drive a motor that will rotate a saber-toothed pig as it cooks over a fire. Notice that they have hung the generator magnet from a tree limb and half-buried the motor magnet in the ground. As you can see, the mammoth is harnessed to the bottom of the generator coil, so the beast will only be able to cause $\frac{1}{4}$ of a rotation before it must stop (remember, this is the first attempt). Nonetheless, that $\frac{1}{4}$ rotation will produce current that will travel to the motor and rotate the pig.



35. When the mammoth pulls the coil, as shown, through which wire will current flow from the generator to the motor?

- A. Wire A
- B. Wire B

36. From the perspective of the cave person, in which direction will the saber-toothed pig rotate as the mammoth pulls the rope.

- A. Clockwise
- B. Counter-Clockwise

37. Assuming that all of the connections are well-sanded, this solenoid buzzer?

- A. Will not work
- B. Has its solenoid turned off
- C. Has its solenoid turned on
- D. Has the battery connected in reverse

See PDF on Website for Diagram

38. If you pass electricity through a coil of wire, in the presence of a permanent magnet, you have made a simple _____.

- a. Generator
- b. Motor

39. If you move a magnet in the presence of a coil of wire, you have made a simple _____.

- a. Generator
- b. Motor