Name _____ Period _____

Magnetism Quiz #4

1. What conditions are necessary to induce a current in a wire?

2. In a transformer the primary coil has 100 turns and is supplied with 120 volts. If the secondary coil has 10 turns what will be the output voltage? Is this a step up or step down transformer?

3. A power company needs to deliver 20 kilowatts to a consumer. What will be the current in the wire if the power is delivered at 120 volts?

4. A power company needs to deliver 20 kilowatts to a consumer. What will be the current in the wire if the power is delivered at 1200 volts?

5. If the resistance in the power line is 50 Ω, how much power is wasted in the power lines:

   a) for #3 (20 kilowatts delivered at 120 volts)?

   b) for #4 (20 kilowatts delivered at 1200 volts)?