

1. The primary winding of a transformer is supplied with 240 V and has 200 turns of wire in the coil. If the number of turns of wire in the secondary is 350, what is the turns ratio and what is the voltage at the terminals of the transformer secondary?
2. A transformer with a 5:1 turn ratio has a high side input of 120 V a 60 Hz, and supplies a 70 Ohm load.

2. A transformer with a 5:1 turn ratio has a high side input of 120 V a 60 Hz, and supplies a 70 Ohm load.

Sketch the circuit and determine (a) voltage at load; (b) load current; (c) input current.

3. An autotransformer with a 30% tap supplies 5.3 A to a resistor load from a 460 V supply line.

Sketch the circuit and determine (a) secondary voltage (tap voltage); (b) primary current; (c) power supplied to the transformer.

4. A certain autotransformer operating in the step-down mode supplies 140 A from a 20% tap to a unity power factor load. The voltage input of the autotransformer is 480 V at 60 Hz.

Neglecting losses, determine (a) low-side voltage; (b) apparent power input; (c) high-side current.