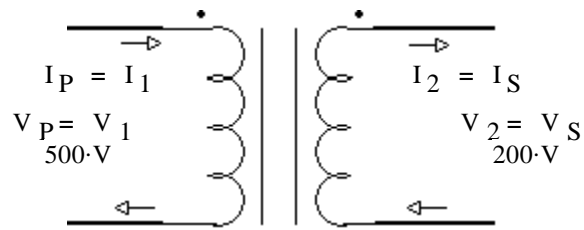


1. 5.7 A 500/200-V, 30-kVA transformer is reconnected as a 700/500-V autotransformer. Compute the new kVA rating of the device. b

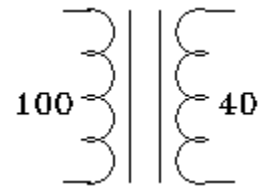
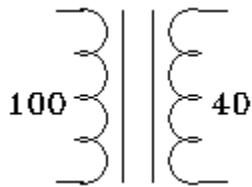
Normally 500/200-V transformer



2. Show connections to the following 100/40-V, 200-VA transformers to get the voltage ratios desired. Compute the new VA rating of each connection.

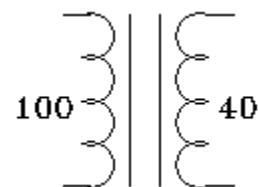
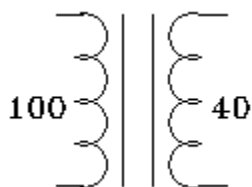
a) 140/40 V

b) 140/100 V



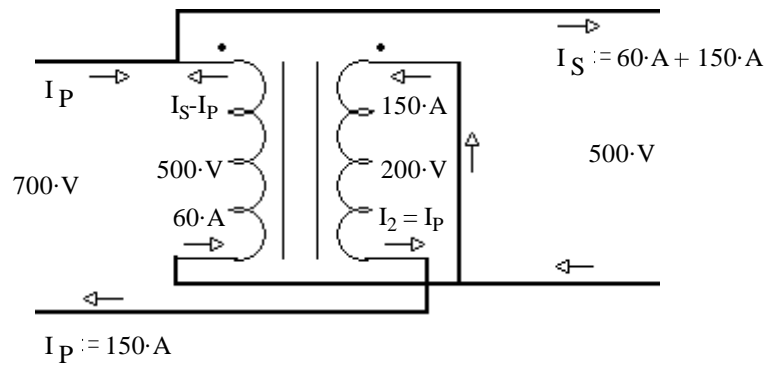
c) 60/40 V

d) 60/100 V

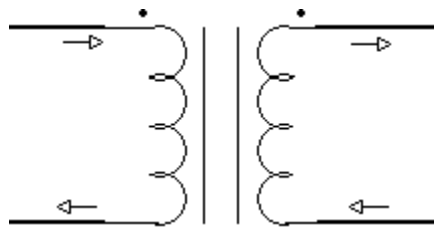


3. 5.8 The terminals of a 500/200-V transformer can be interconnected in four different ways, two of which will result in a 700/500-V autotransformer. Assume that you have interconnected the windings in the wrong way, but that you believe that you did it the right way. In other words, you think that you have a 700/500-V autotransformer when in fact you have something else. As you now connect the “700-V terminals” of your device to a 700-V source, you expect to obtain 500-V between what you presume to the “500-V terminals.” To your surprise you get an entirely different voltage.

500/200-V, 30-kVA transformer reconnected CORRECTLY as a 700/500-V autotransformer at maximum voltages and currents:



Show a possible INCORRECT connection:



a) What voltage do you get?

b) What will happen to your transformer with this kind of treatment?