Homework 12.

Problems:

To solve these problems, we have to remember that if 2 (or more) circuit nodes are connected with the ideal wire, they have same potential. It does not mean that the current in this ideal wire is equal to zero: since ideal wire has zero resistance, the current through this wire can flow even if the potentials of the wire ends are equal. You can think of it as of the ball on the horizontal frictionless plane. Once pushed, the ball will roll forever in spite of the plane has no slope.

1. Find current I in the circuit below. Suggest 2 ways to solve the problem:
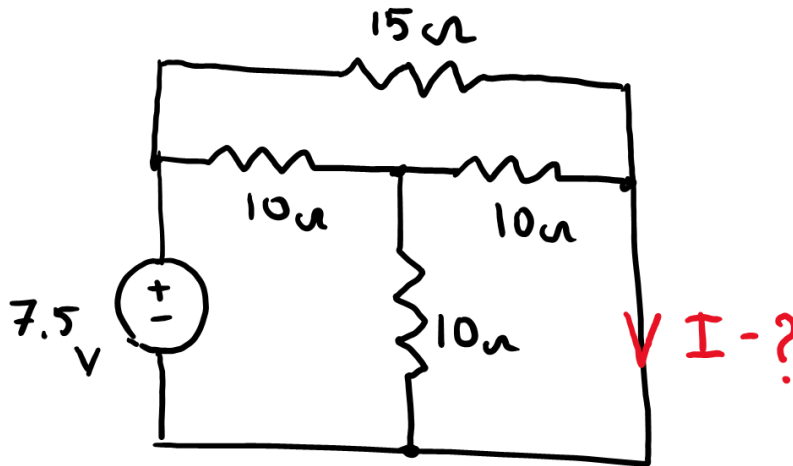
2. Find the formula for the current I in the circuit below. V=12V:
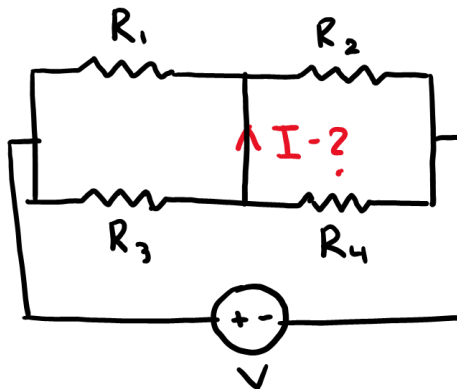
   a) $R_1=R_4=2$ Ohm; $R_2=R_3=4$ Ohm;
   b) $R_1=R_2=R_3=2$ Ohm; $R_4=4$ Ohm.