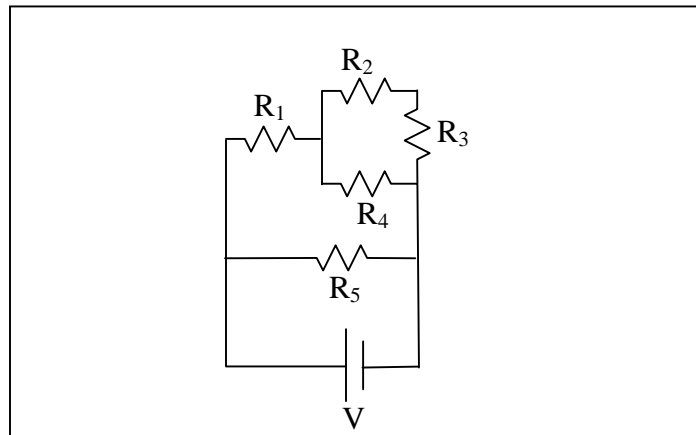


## Physics 206b

Homework Assignment VII  
Due Wednesday, October 3, 2007

*My apologies for throwing you a little curveball on this one: The assignment is due on Wednesday. I want to ensure that you have ample opportunity to practice the skills that are likely to appear on your exam on Friday, October 5.*

1. A man with a mass of 80 kg is being lifted by a winch. The winch is powered by a 12 V battery and has a resistance of  $7\ \Omega$ . How long does it take the winch to lift the man 17 meters?
2. Find the current that passes through each of the resistors in the circuit below. Also, find the total resistance of the circuit. Take the resistances to be as follows:  $R_1 = 3\ \Omega$ ,  $R_2 = 5\ \Omega$ ,  $R_3 = 7\ \Omega$ ,  $R_4 = 11\ \Omega$ ,  $R_5 = 13\ \Omega$ . Take  $V=9\ \text{V}$ . (Note the problem below. You may want to answer both of these problems simultaneously, in the form of a table.)



3. For each of the resistors in the above circuit, find the potential (relative to zero) at the point immediately following each resistor.