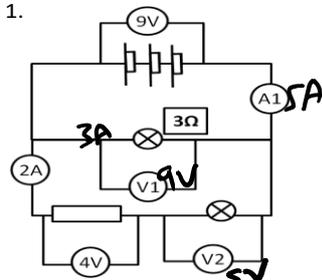


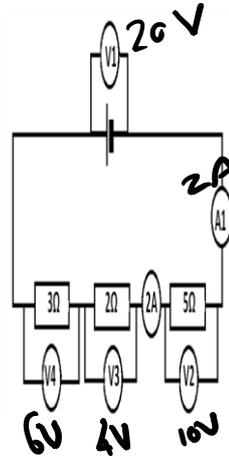
**Current, Voltage and Resistance**

Apply the rules of current and voltage to the following circuits and use the  $V=IR$  equation to work out the missing currents, voltages and resistances as required. Unless stated otherwise, assume all bulbs are identical. **DON'T FORGET YOUR UNITS!**

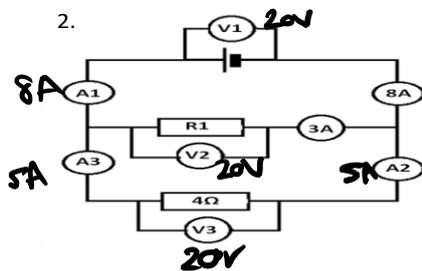
Remember: To work out resistors in series  $R_{Total} = R_1 + R_2 + R_3$



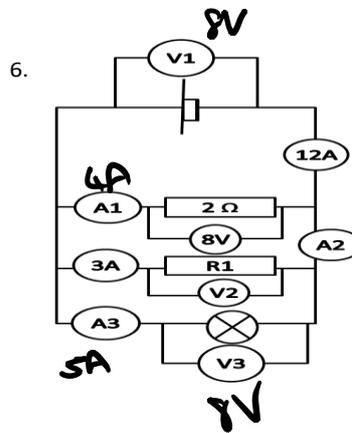
1.  
 $A_1 = 5A$   
 $A_2 = 3A$   
 $V_1 = 9V$   
 $V_2 = 5V$   
 $V_3 = \underline{\hspace{2cm}}$



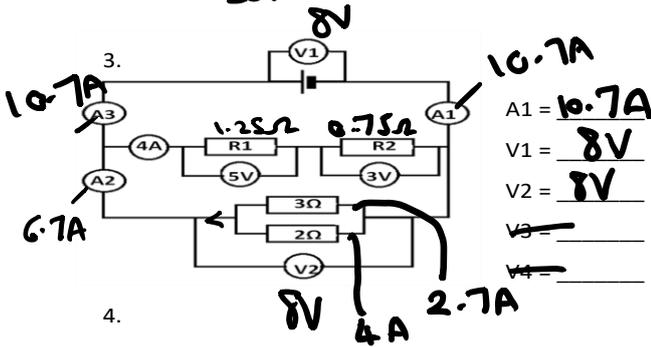
2.  
 $A_1 = 2A$   
 $A_2 = \underline{\hspace{2cm}}$   
 $A_3 = \underline{\hspace{2cm}}$   
 $V_1 = 20V$   
 $V_2 = 10V$   
 $V_3 = 4V$   
 $R_1 = \underline{\hspace{2cm}}$



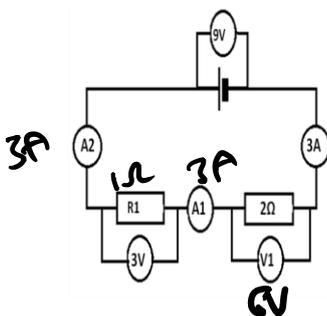
3.  
 $A_1 = 8A$   
 $A_2 = 5A$   
 $V_1 = 20V$   
 $R_1 = 6.7\Omega$



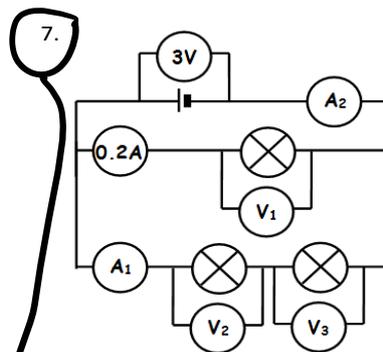
4.  
 $A_1 = 4A$   
 $A_2 = 8A$   
 $A_3 = 5A$   
 $V_1 = 8V$   
 $V_2 = 8V$   
 $R_1 = 2.7\Omega$   
 $R_2 = \underline{\hspace{2cm}}$



5.  
 $A_1 = 10.7A$   
 $V_1 = 8V$   
 $V_2 = 8V$   
 $V_3 = \underline{\hspace{2cm}}$   
 $V_4 = \underline{\hspace{2cm}}$



6.  
 $A_1 = 3A$   
 $V_1 = 6V$   
 $V_2 = \underline{\hspace{2cm}}$   
 Calculate the resistance of:  
 The bulb =  $\underline{\hspace{2cm}}$   
 The resistor =  $\underline{1\Omega}$



7.  
 $A_1 = 0.1A$   
 $A_2 = 0.3A$   
 $A_3 = \underline{\hspace{2cm}}$   
 $V_1 = 3V$   
 $V_2 = 1.5V$   
 $V_3 = 1.5V$   
 $R_1 = 1.5\Omega$

not a good question; you have to assume all bulbs are identical and have same R (yet R varies with I!)