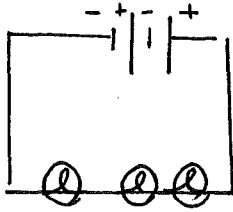
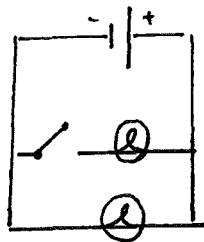


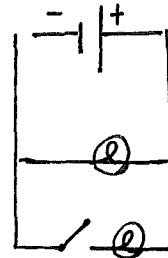
1. Two-cell battery connected to three light bulbs in series.



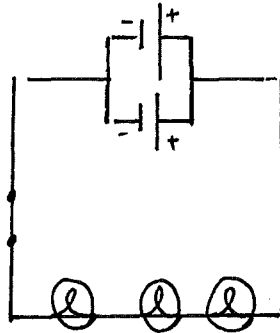
2. One-cell battery connected to two light bulbs in parallel. A switch controls one light bulb.



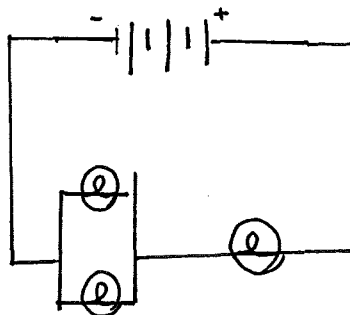
OR



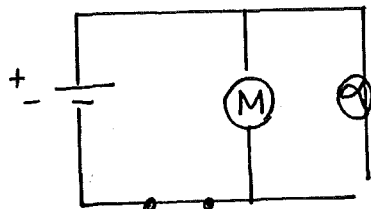
3. Two one-celled batteries in parallel, connected to three light bulbs in series. A switch controls the bulbs.



4. Three-celled battery connected to two light bulbs in parallel and a third light bulb connected in series.



5. A one-celled battery, a switch, a motor and a light bulb all connected. The motor must continue to work, if the light bulb burns out.

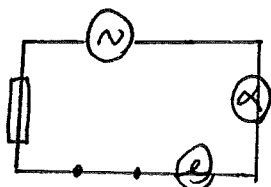


Circuit Diagrams Practice

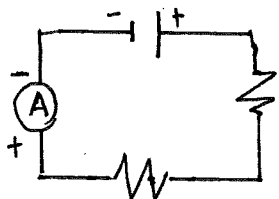
Hint:

- A voltmeter measures the energy loss across 2 points, it is connected **in parallel** over a source or load
- An ammeter is connected **in series** because it measures the current

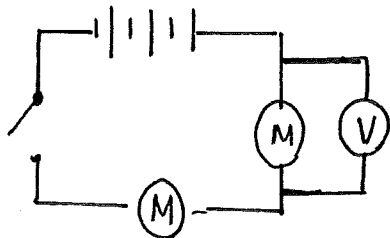
1. Draw a simple circuit using symbols for an AC source, a fuse, a closed switch, and 2 lamps.



2. Draw a circuit with 1 cell, 2 resistors, and an ammeter.

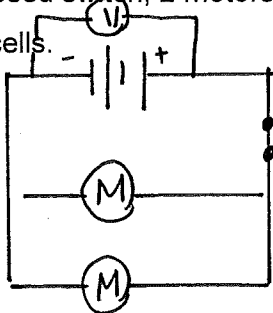


3. Draw 3 cells connected to 2 motors, a voltmeter, and an open switch.

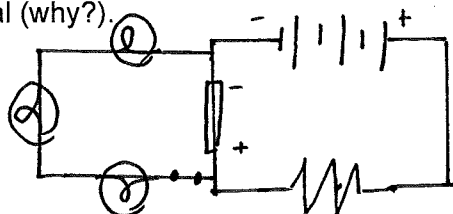


Will the motors run? Explain no since the switch is open, no current runs through

4. Draw 2 cells, a closed switch, 2 motors parallel to the cell and a voltmeter to measuring potential difference of the cells.



5. Draw a circuit with 3 cells, a fuse, and a resistor in the main circuit. Include a closed switch to control 3 light bulbs parallel to the fuse. Draw the direction of electron flow. * fuse must always follow the negative terminal (why?)



Will this light up? Explain yes if the switch is closed