

Mystery Series and Parallel Circuit

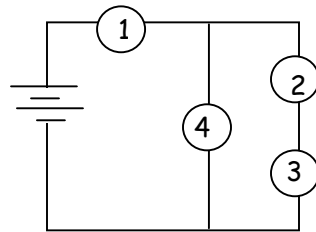
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Materials necessary:

Cheap two prong extension cord
wire nuts
wire cutters

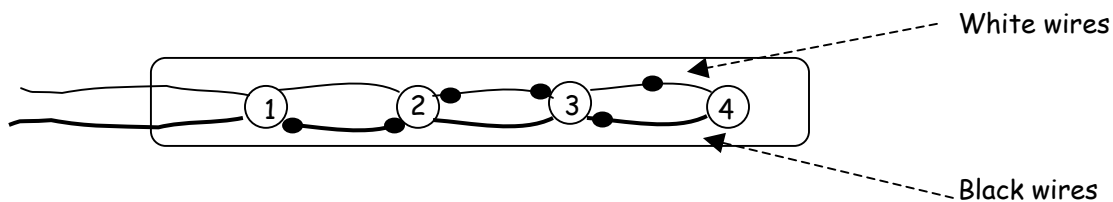
4 bulb bath bar
4 40-W light bulbs
wire strippers

Final circuit to be constructed:

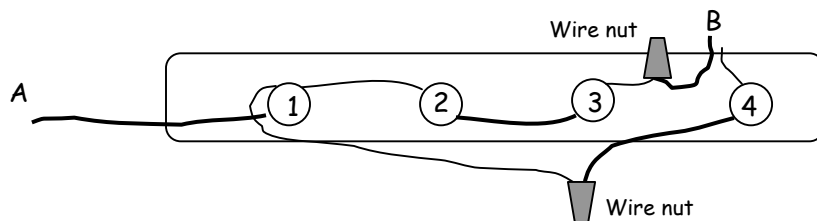


Construction:

1. Cut off female end of extension cord and separate the two wires from each other for about 6" of length. Strip each wire so there is about 1/2" of bare wire showing on the end.
2. Remove the back of the bath bar by unscrewing the 4 screws inside each of the lamp bases. Don't lose the screws!
3. Cut the wires at the dots shown in the diagram below: remove the white wire between 2 and 3; remove the black wire between 1 and 2; cut the black wire next to 3; cut the white wire midway between 3 and 4. I cut close to the socket so there were no loose wires (except for the cut in the middle between 3 and 4).



4. Reconnect the wires as shown below: you can use one of the spare pieces of wire to lengthen the wire connected to socket 3. Twist the wires together before screwing on the wire nut.



5. Insert the stripped ends of the extension cord through the (still disconnected) back of the light fixture.
6. Connect the long black wire (A) to one of the two stripped ends of the extension cords with a wire nut. Connect the other stripped wire of the extension cord to other two wires (at B).
7. Replace the back of the light fixture with the screws in the sockets. Make sure to lay all the wires carefully back in the base.