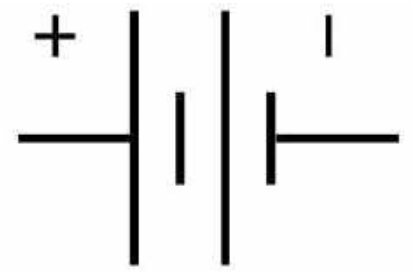
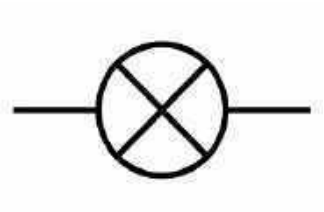
E: Electrical - Circuits

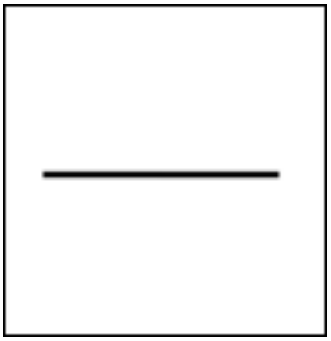
An electronic circuit is an interconnection of electrical components that generates energy. Certain symbols are used to draw the design of a circuit. The symbols are given below along with an example of a perfect circuit with a single bulb. Follow them carefully and design another circuit to light two bulbs at a time.



battery



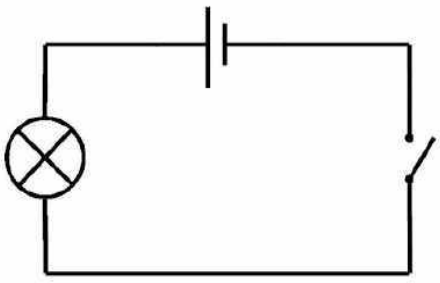
bulb/lamp



wire

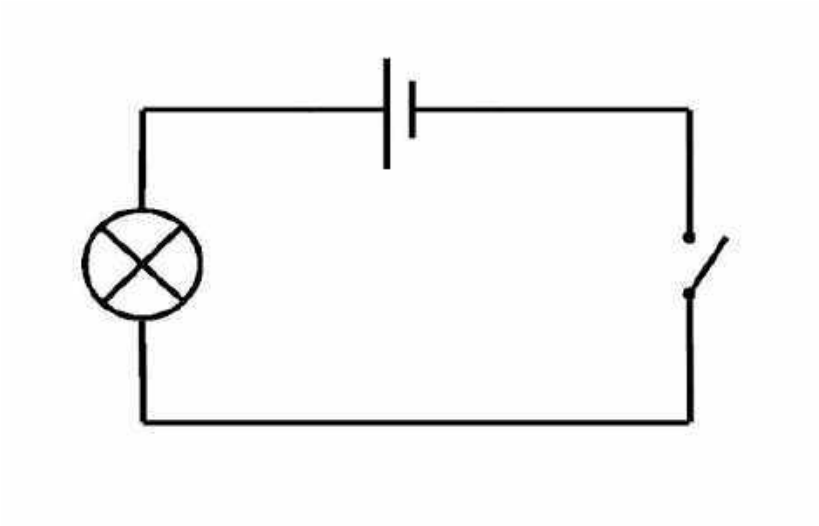
switch open

switch closed



E: Electrical - Circuits in series

In a series circuit, the current that flows through each of the components is the same. All of the parts of a series circuit - power source (battery), wires, and devices (lamp or other devices) are connected along the same pathway with no branches. Below is a simple series circuit is drawn for a single bulb. Can you draw another with three or more bulbs?



E: Electrical - Circuits in parallel

In a parallel circuit, the current divides into separate paths. Thus it compromises branches so that the current divides and only part of it flows through any branch. Here is a simple parallel with two bulbs drawn below. Follow it carefully and draw another circuit for at least four bulbs.