

1. It is preferable to connect bulbs in series or in parallel? (Hint: What if one bulb burns out?)

a) Series

b) Parallel

c) Both series and parallel

d) Neither series nor parallel

Explanation: Bulbs are connected in parallel so that even if one of the bulbs blows out, the others continue to get a current supply.

2. Batteries are most efficient when connected in _____ (Hint: Which method doubles the voltage?)

a) Series

b) Parallel

c) Either series or parallel

d) Neither series nor parallel

Explanation: Batteries are generally connected in series so that we can obtain the desired voltage since voltages add up once they are connected in series.

3. Which is the most cost efficient connection? (Hint: In which method do bulbs share the voltage?)

a) Series

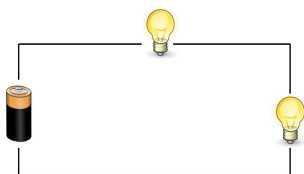
b) Parallel

c) Either series or parallel

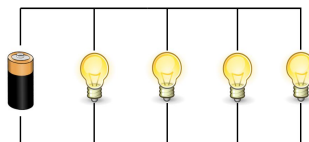
d) Neither series nor parallel

Explanation: The advantage of series-connections is that they share the supply voltage, hence cheap low voltage appliances may be used.

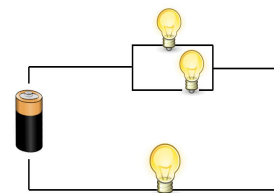
4. For the following circuits, state if the circuits are series, parallel, or both:



Series



Parallel

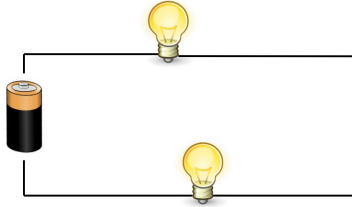


Both

5. In the space provided, draw each of the following circuits:

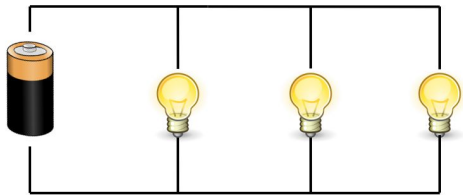
a) A series circuit with 2 light bulbs and 1 battery

Example:



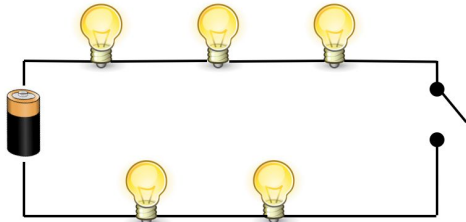
b) A parallel circuit with 3 light bulbs and 1 battery

Example:



c) A series circuit with 5 light bulbs, 1 battery, and 1 switch (in the “off” position).

Example:



d) A parallel circuit with 4 light bulbs, 1 battery, and 1 switch (in the “off” position).

Example:

