

Circuit Diagrams

Name: Key

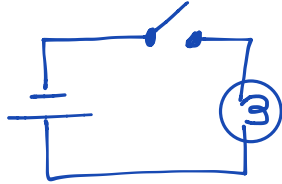
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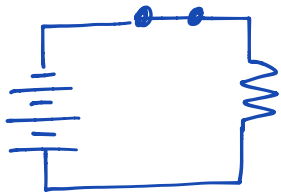
* Ammeters are connected in series
 * Voltmeters are connected in parallel

Draw a circuit diagram for the following scenarios:

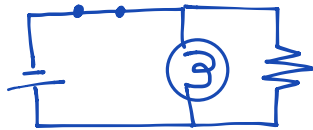
1. Draw a circuit that has a cell, an open switch and one light bulb connected in series.



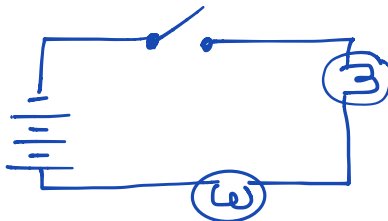
2. Draw a circuit that has a battery, a closed switch and a resistor connected in series.



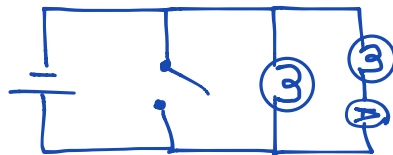
3. Draw a circuit that has a cell and a closed switch on the main path, a light bulb on the first branch and a resistor on the second branch connected in parallel.



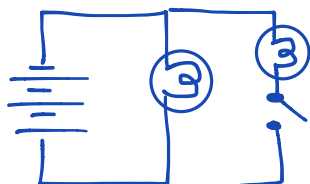
4. Draw a circuit that has a battery, an open switch and two light bulbs in series.



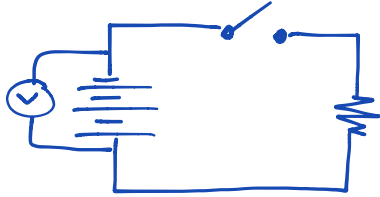
5. Draw a circuit that has a cell and an open switch on the main path, a light bulb on the first branch and a light bulb with an ammeter after it on the second branch connected in parallel.



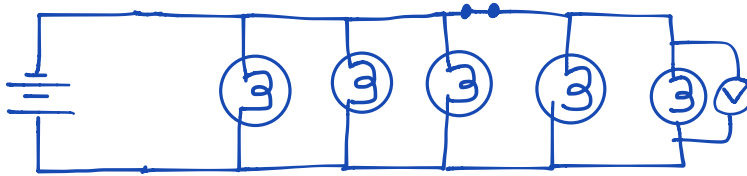
6. Draw a circuit with a battery and two light bulbs in parallel with an open switch controlling one of the two light bulbs.



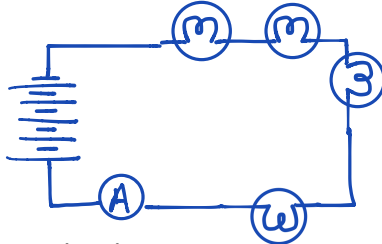
7. Draw a circuit with three cells in series, an open switch, a resistor and a voltmeter measuring the voltage of the cells.



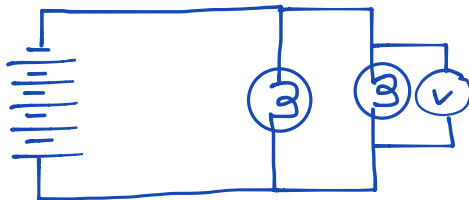
8. Draw a circuit with two cells in series, 5 light bulbs in parallel, a closed switch that controls two of the 5 light bulbs and a voltmeter measuring the voltage across one of the light bulbs.



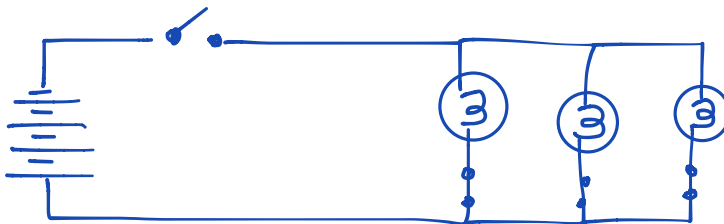
9. Draw a circuit with 5 cells in series, four light bulbs in series and an ammeter.



10. Draw a circuit that has 5 cells in series, two light bulbs in parallel and a voltmeter measuring the voltage across one of the light bulbs.



11. Draw a circuit diagram containing 4 cells in series, three pathways and a lamp on each pathway. Add switches to control each of the lamps and a fourth switch to control all of the lamps.



12. Draw a circuit diagram that contains a battery is powering a strand of 6 consecutive Christmas tree light bulbs. The strand is a closed circuit but has an on/off switch that allows the user to turn the lights off when not in use.

