

What happens when you put batteries in Series and Parallel?



The voltage of this battery is 1.5 volts.



These batteries are connected in **series**. The overall voltage is a sum of the two batteries. The measure of voltage is 3 volts!



These batteries are wired in **parallel**. The overall voltage is the same. The measure of voltage is 1.5 volts!



What happens when you put batteries in Series and Parallel inside your flashlight?



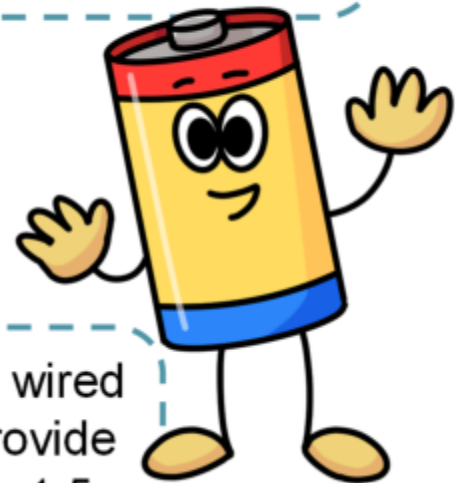
Let's assume that this battery will provide your flashlight with 1.5 volts and run your flashlight for 1 hour of continuous use.



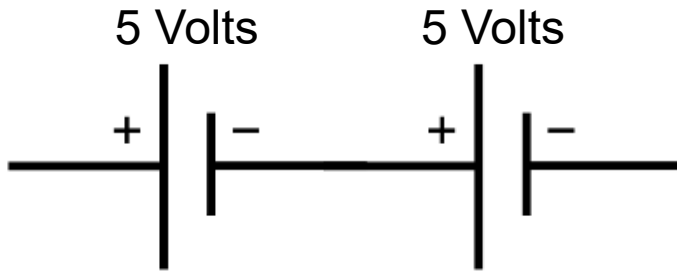
These batteries are connected in **series**. It will provide your flashlight with 3 volts for 1 hour of continuous use.



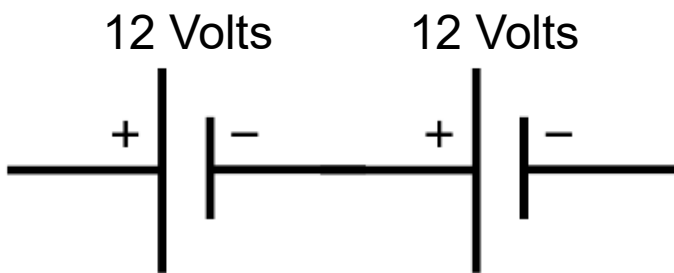
These batteries are wired in **parallel**. It will provide your flashlight with 1.5 volts for 2 hours.



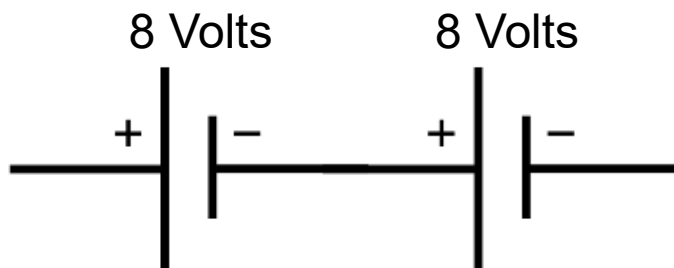
Let's figure out the voltage value of these batteries in Series!



Total Voltage is _____



Total Voltage is _____

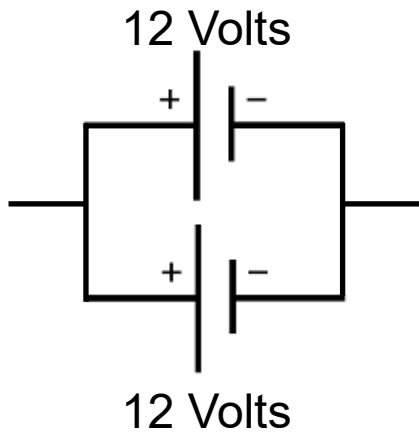


Total Voltage is _____

Because of differences in battery types and voltages, It is not a good idea to mix battery sizes and types in series or parallel.

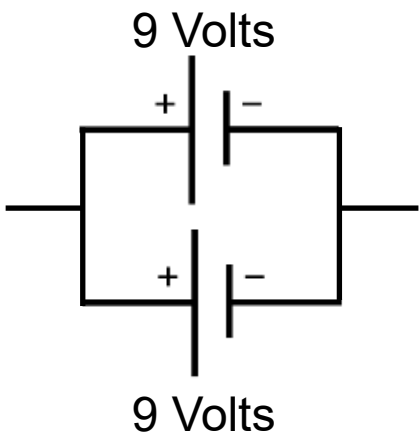
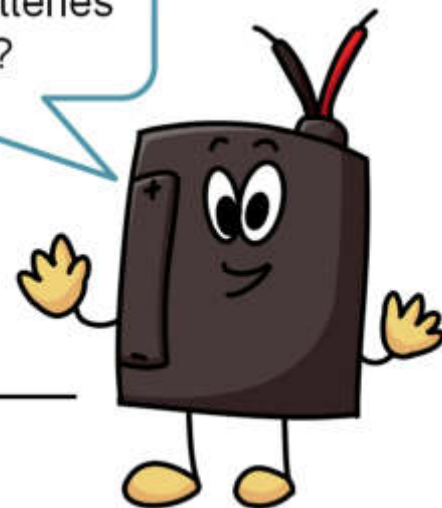


Let's figure out the resistance value of these resistors in Parallel!

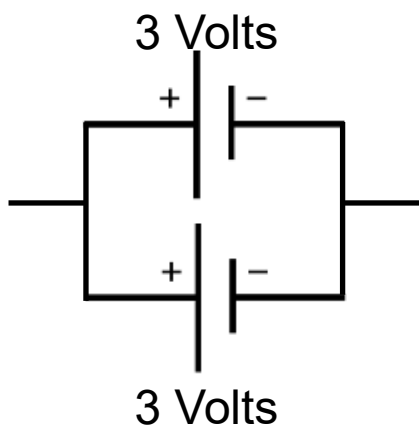


Total Voltage is _____

Can you think of any advantages to having batteries in series or parallel?



Total Voltage is _____



Total Voltage is _____

