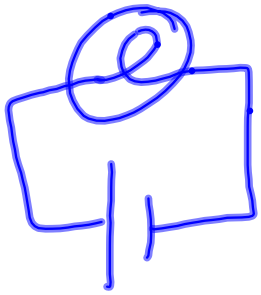
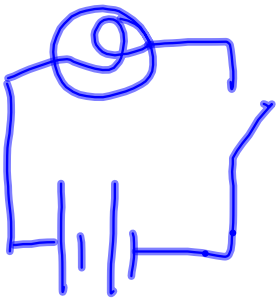
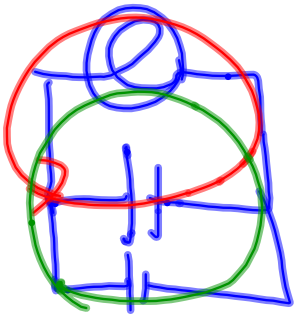
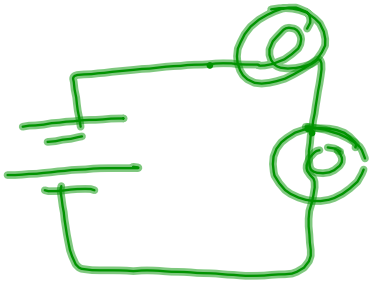




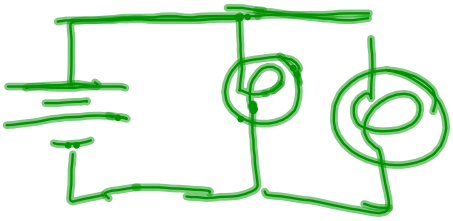
- light bulb got brighter
- doubled voltage, increased current



- same brightness as 1 battery
- But more current



* if one goes out
both go out
* about the same brightness
as a single bulb.



* much brighter

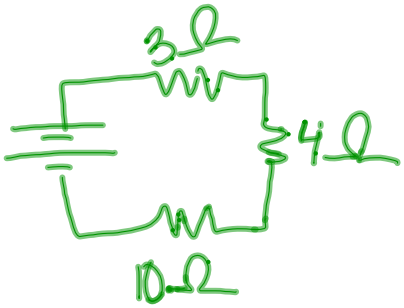
Parallell Resistors lower resistance of the circuit.

Equivalent Resistance:

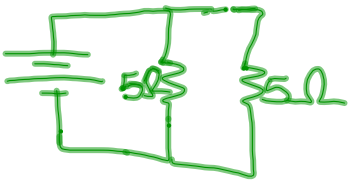
$$R_s = R_1 + R_2 + R_3 + \dots$$

↗ series

$$\frac{1}{R_p} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \dots$$



$R = 3 + 4 + 10 = 17\Omega$



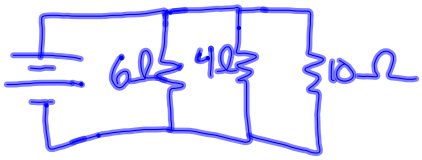
$\frac{1}{R} = \frac{1}{5} + \frac{1}{5}$

$R \cdot 5 \left(\frac{1}{R} = \frac{2}{5}\right) R \cdot 5$

$R = \frac{5}{2}$

$\frac{5}{2} = \frac{2R}{2}$

$R = 5/2$

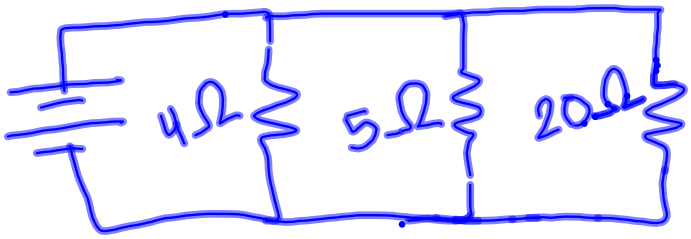


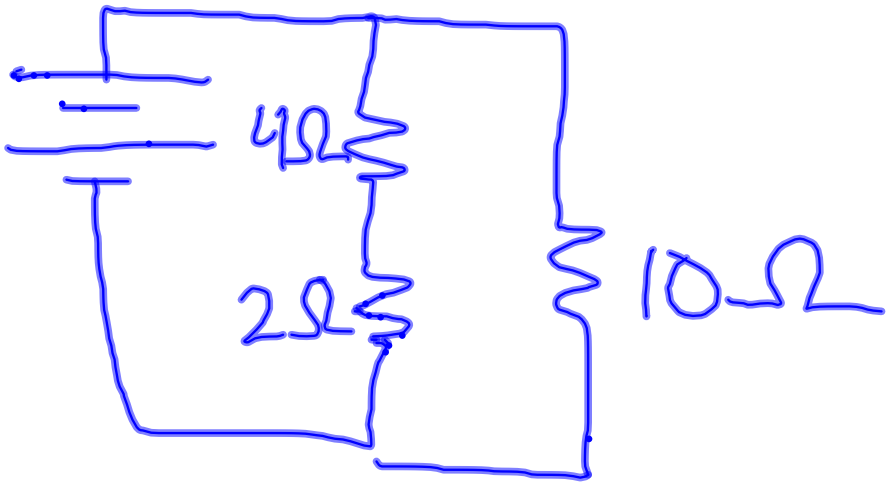
$\frac{1}{R_T} = \frac{1}{6} + \frac{1}{4} + \frac{1}{10}$

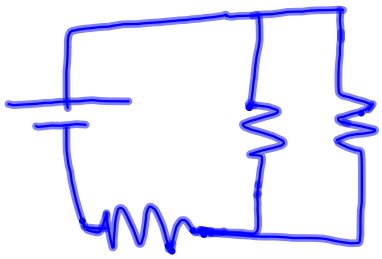
$\frac{1}{R_T} = \frac{.51666}{1}$

$R_T = \frac{1}{.51666}$

$R_T = 1.9\Omega$







$R = 2$ ⇓ - Davis