


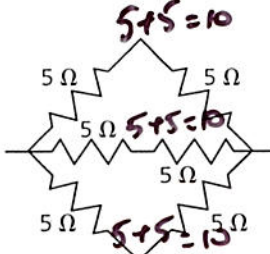
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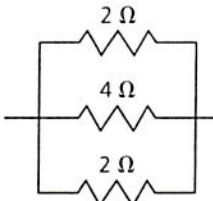
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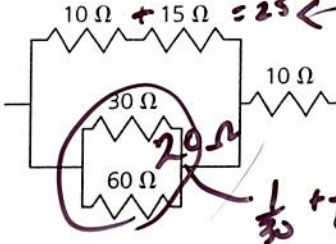
Calculating Total Resistance ①

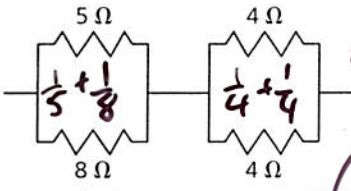
Calculate the total resistance (R_T) for the following combinations of resistors.

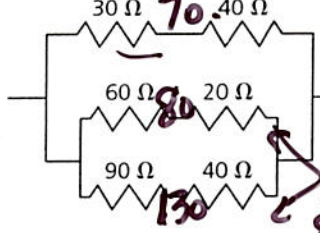
(a) 
 $R_{eq} = R_1 + R_2 + R_3$
 $= 3 + 2 + 3 = 8$

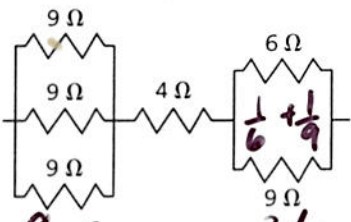
(f) 
 $\frac{1}{10} + \frac{1}{10} + \frac{1}{10}$
 $\frac{10}{3} = 3.3$

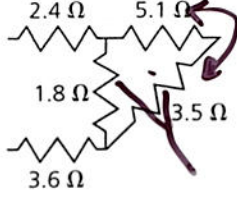
(b) 
 $\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$
 $\frac{1}{2} + \frac{1}{4} + \frac{1}{2} = R_{eq}$
 $= .8$

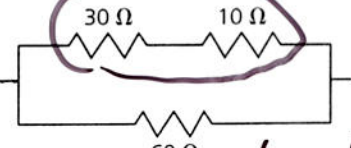
(g) 
 $10\Omega + 15\Omega = 25$
 $\frac{1}{30} + \frac{1}{60} \Rightarrow 20$
 $\frac{1}{25} + \frac{1}{20} \Rightarrow 11.1$
 $11.1 + 10 = 21.1$

(c) 
 $\frac{1}{5} + \frac{1}{8}$
 $\frac{1}{4} + \frac{1}{4}$
 $3.1 + 2 = 5.1$

(h) 
 $\frac{1}{70} + \frac{1}{21.8}$
 $\frac{1}{80} + \frac{1}{130} = 21.8$
 16.6

(d) 
 $\frac{1}{9} + \frac{1}{9} + \frac{1}{9}$
 all same
 $\frac{9}{3} = 3$
 $\frac{1}{6} + \frac{1}{9}$
 3.6
 $3 + 4 + 3.6$
 $= 10.6$

(i) 
 $5.1 + 3.5 = 8.6$
 $\frac{1}{1.8} + \frac{1}{8.6} \rightarrow .67$

(e) 
 $30 + 10 = 40$
 $\frac{1}{40} + \frac{1}{60}$
 24

$2.4 + .67 + 3.6$
 6.67