H

G

F

R

R

R

R

R

$$R=8Ω$$

H

F

R

R

R

R

R

$$R\_{FH}=\frac{(2R)(2R)R}{\left(2R\right)R+\left(2R\right)R+\left(2R\right)(2R)}=\frac{4R}{8}=4Ω$$

G

F

R

R

R

R

R

G

F

R

2R

R

R

$$R\_{FG}= \frac{\left[\frac{(2R)R}{\left(2R\right)+R}+R\right]R}{\left[\frac{(2R)R}{\left(2R\right)+R}+R\right]+R}=\frac{\frac{5}{3}R}{\frac{5}{3}+1}=\frac{5}{8}R=5Ω$$