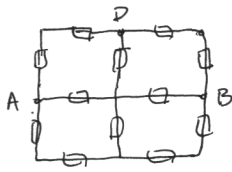


Résistances équivalentes

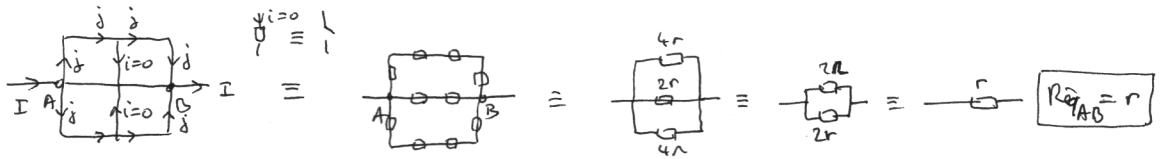
1



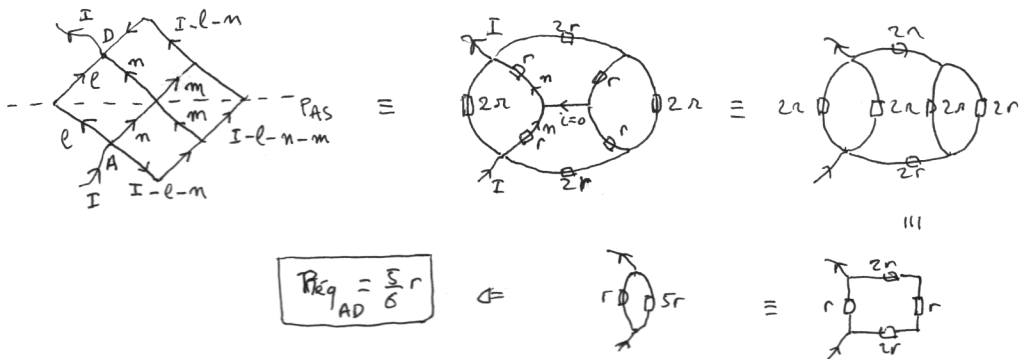
$R_{eq}$ ?  $\rightarrow$  entre A et B  
 $\rightarrow$  entre A et D

résistances identiques  $r$

entre A et B :



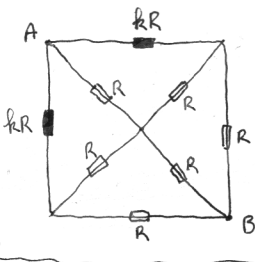
entre A et D :



$R_{eq AD} = \frac{5}{6} r$

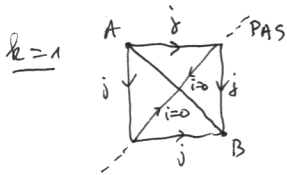
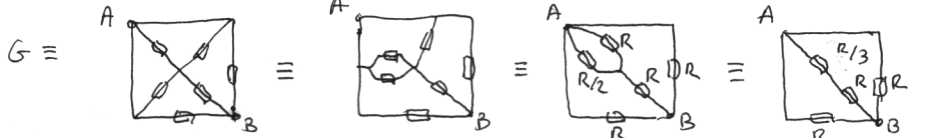
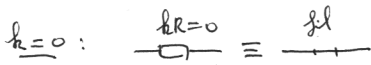
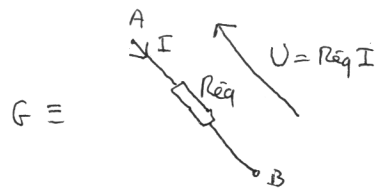
Énoncé :

2

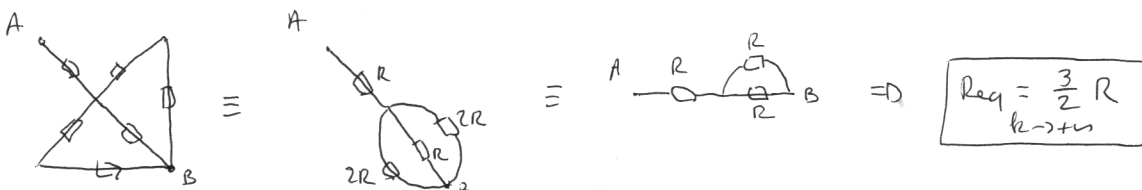
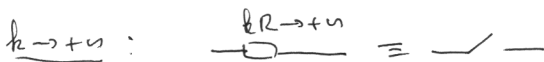
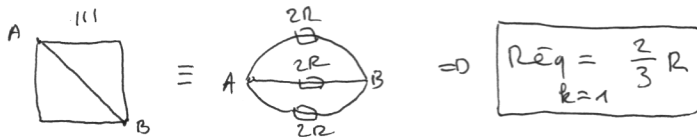
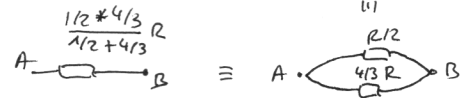


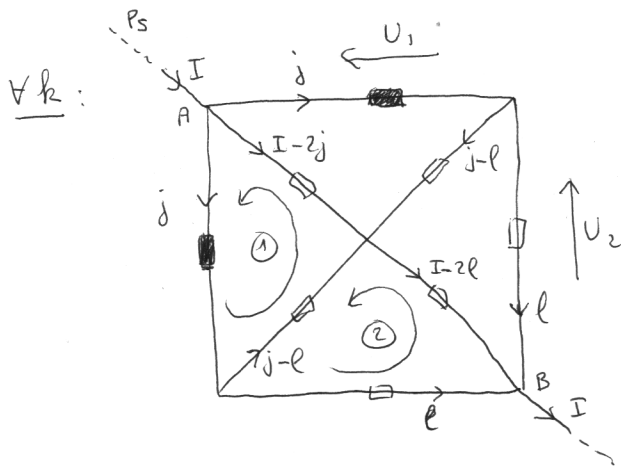
$R_{eq AB}$  pour :  $\rightarrow k=0$   
 $\rightarrow k=1$   
 $\rightarrow k \rightarrow +\infty$   
 $\rightarrow \forall k$

$G \equiv$



$R_{eq} = \frac{4}{11} R$   $k=0$





$$\begin{cases} \textcircled{1} & -kRj - R(j-l) + R(I-2j) = 0 \\ \textcircled{2} & R(j-l) - Rl + R(I-2l) = 0 \end{cases}$$

$$\begin{cases} I = (3+k)j - l \\ I = 4l - j \Rightarrow j = 4l - I \end{cases}$$

$$\Rightarrow I = (3+k)4l - (3+k)I - l$$

$$\Rightarrow I(k+4) = l(11+4k)$$

$$\Rightarrow \boxed{l = \frac{k+4}{4k+11} I}$$

$$j = \frac{4k+16-4k-11}{4k+11} I \Rightarrow \boxed{j = \frac{5}{4k+11} I}$$

or:  $U = U_1 + U_2 = kRj + Rl = \frac{5k+k+4}{4k+11} RI = \frac{6k+4}{4k+11} RI = R_{eq} I$

$$\Rightarrow \boxed{R_{eq} = \frac{6k+4}{4k+11} R}$$

$k=0$	$\rightarrow$	$\frac{4}{11} R$	
$k=1$	$\rightarrow$	$\frac{10}{15} R = \frac{2R}{3}$	
$k \rightarrow \infty$	$\rightarrow$	$\frac{6}{4} R = \frac{3}{2} R$	<u>OK</u>