METHODE DE CALCUL DE L'ENERGIE INTERNE

$$U = \frac{1}{2}\sum_{i=1}^{n}\sum_{j=1\ i\neq j}^{n} k\frac{q_i q_j}{rij}$$

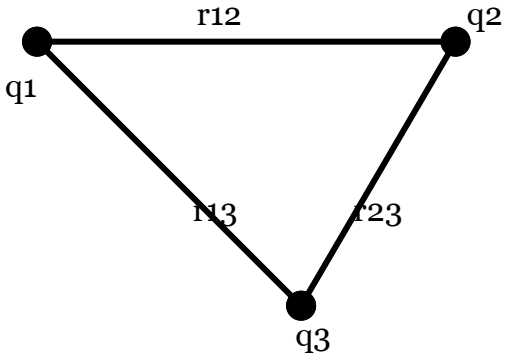
$$U = k\sum \frac{produit\ des\ charges\ prises\ 2\ à\ 2\ sans\ répétition}{distance\ entre\ les\ 2\ charges}$$

1- Cas de 2 charges

$U = k\frac{(q_1 \times q_2)}{r}$

2- Cas de 3 charges

$U = k\left[\frac{(q_1 \times q_2)}{r12} + \frac{(q_1 \times q_3)}{r13} + \frac{(q_2 \times q_3)}{r23}\right]$



3- Cas de 4 charges

$U = k\left[\frac{(q_1 \times q_2)}{r12} + \frac{(q_1 \times q_3)}{r13} + \frac{(q_1 \times q_4)}{r14} + \frac{(q_2 \times q_3)}{r23} + \frac{(q_2 \times q_4)}{r24} + \frac{(q_3 \times q_4)}{r34}\right]$