The *first theorem of Green* is:

$$\iiint\limits_{\mathcal{G}} \Big[u\nabla^2 v + (\nabla u, \nabla v) \Big] d^3V = \oiint\limits_{\mathcal{S}} u\frac{\partial v}{\partial n} d^2A$$

The *second theorem of Green* is:

$$\iiint\limits_{\mathcal{G}} \Big[u\nabla^2 v - v\nabla^2 u \Big] d^3V = \oiint\limits_{\mathcal{S}} \left(u\frac{\partial v}{\partial n} - v\frac{\partial u}{\partial n} \right) d^2A$$