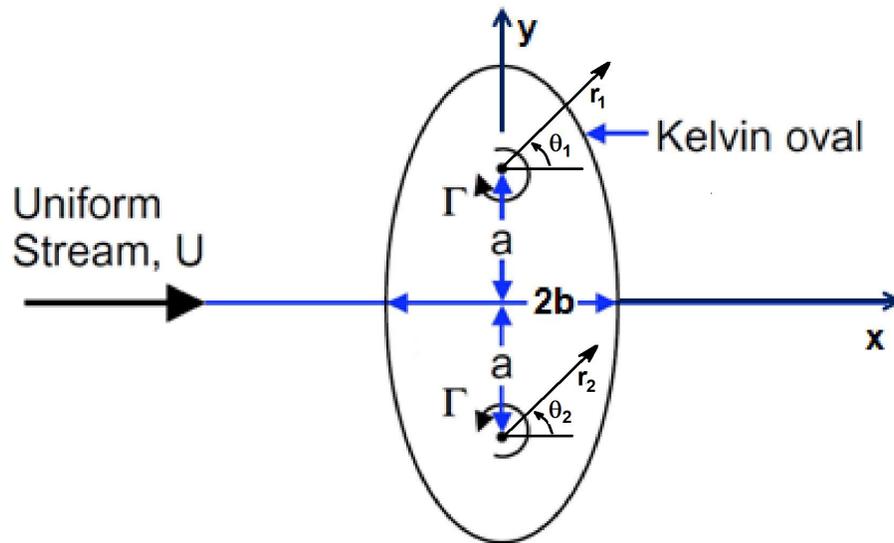


**Problem 120E:**

A planar potential flow of an incompressible fluid around a finite body [called a Kelvin oval] is simulated by the superposition of two vortices of opposite rotation and a uniform stream of velocity,  $U$ . The vortices have the same magnitude of circulation,  $\Gamma$ , and are located a distance  $2a$  apart: Find the axial length,  $L$ ,



of the body in terms of  $a$ ,  $U$  and  $L$ .