Ideal Flows - 2

1. An oval consists of a horizontal uniform flow ($V_\infty = 10$)
   of air over a source ($\lambda = 15$ at $x = -2, y = 0$) and a sink
   ($\lambda = -15$ at $x = 2, y = 0$). Quantities in meters.
     a) Find the location of the stagnation point(s).
     b) Find the maximum thickness.
     c) Verify these results using the Ideal Flow
        Machine at www.engapplets.vt.edu
     d) Find the velocity at the top point ($x = 0, y = y_{max}$).
     e) If $p_\infty = 100,000 Pa$, what is the pressure at the top
        point

2. Use the Ideal Flow Machine to locate the stagnation
   points in the following flows.
     a) Uniform flow $V\infty = 1$,
        c.c.w vortex of strength 4.0 located a distance of
        1.0 above a wall.
     b) Uniform flow $V\infty = 1$,
        c.w vortex of strength 4.0 located a distance of
        1.0 above a wall.