F19. Determine the $C_p$ variation along the $-x$ and $+y$ directions for
a) Freestream $V_\infty$ with source of strength $\Lambda$
b) Freestream $V_\infty$ with vortex of strength $\Gamma$
c) Freestream $V_\infty$ with doublet of strength $\kappa$.

At large distances, where does a lifting airfoil cause the strongest disturbance to the flow (as measured by $C_p$), above and below, or fore and aft? Explain.