## (KEY CONCEPT) [B-3-2] $h \vdash V_{\infty}$ $\psi = \text{const}$ $\psi = V_{\infty} y$ $\phi = V_{\infty} x$

Uniform flow with magnitude  $V_{\infty}$ 

Flow direction: from left to right (in the positive x coordinate direction)

$$\psi = V_{\infty}y = V_{\infty}r\sin\theta$$
$$\phi = V_{\infty}x = V_{\infty}r\cos\theta$$

Potential flow field simulation (source: J.D. Anderson "Fundamentals of Aerodynamics" 2016)

