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1. (a) $l/a = \pm(1+\eta)^{1/2}$
   (b) $h/a = \eta \cot^{-1}(h/a)$
2. (a) $u \to -\Gamma/2d$ as $y/d \to \infty$ and $+\Gamma/2d$ as $y/d \to -\infty$; $v \to 0$
3. (b) $h_2 = h_1/2$
   (c) $b_2 = h_1 - h_2$
4. (a) $\delta/L \sim \mathrm{Re}_L^{-1/2}$
   (d) $a_1 = 3/2$; $a_3 = -1/2$
   (e) $\theta = (39/280)\delta$; $c'_f = 3\nu/(\delta U)$
   (f) $\delta/x = 4.64\mathrm{Re}_x^{-1/2}$
5. (a) $B = 2A$
   (b) $F(r) = rg(r)U(r)$
   (c) $u = Arf'$; $v = -2A(\nu/A)^{1/2} f$; $\partial u/\partial r = Af'$; $\partial u/\partial z = Arf''(A\nu)^{1/2}$
   (d) $f''' + 2ff'' + 1 - (f')^2 = 0$; $f(0) = f'(0) = 0$; $f'(\infty) = 1$
6. (a) 3.45δ
   (b) 0.6
   (c) 5.5°
7. (a) $X = 0.75c$
   (b) $\Gamma_1 = (9/8)\Gamma_0$; $\Gamma_2 = (7/8)\Gamma_0$
8. (f) $C_D \approx 0.004$