

$$C_{L,minS} = \sqrt{3\pi eAR C_{D,0}}$$

$$\begin{aligned} C_{L,maxLD} &= \sqrt{\pi eAR C_{D,0}} \\ &= \frac{C_{L,minS}}{\sqrt{3}} \end{aligned}$$

When coefficient of lift minimum sink is 1, induced drag equals parasite drag
(but why?)

We can in this case just use parasite drag twice to divide by drag.

$$\begin{aligned} (L/D)_{max} &= \frac{\sqrt{\pi eAR C_{D,0}}}{2C_{D,0}} \\ &= \frac{\sqrt{\pi}}{2} \sqrt{eAR} \frac{\sqrt{C_{D,0}}}{C_{D,0}} \\ &= \frac{\sqrt{\pi}}{2} \sqrt{eAR} \frac{1}{\sqrt{C_{D,0}}} \\ &= \frac{\sqrt{\pi}}{2} \sqrt{\frac{eAR}{C_{D,0}}} \end{aligned}$$