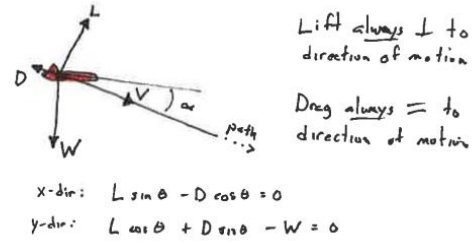
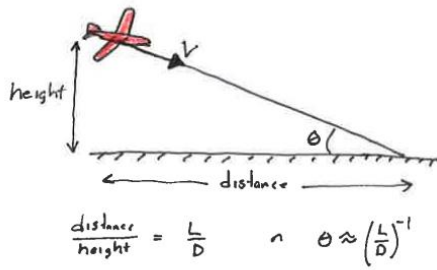
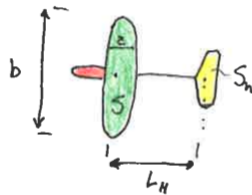


# Glider Cookbook



The horizontal surface area should be approximately

$$S_h \approx K \cdot \frac{S \cdot \bar{z}}{L_H}$$



Sometimes we call  $S_h \cdot \frac{L_H}{\bar{z}}$  = tail volume

$K \approx 1.2$  duration  
 $\approx 0.6$  distance

$S$  = wing Area

$\bar{z}$  = wing MAC

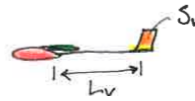
$L_H$  = distance from  $1/4 \bar{c}$  MAC of wing to  $1/4 \bar{c}$  MAC of horizontal

$L_V$  = distance from  $1/4 \bar{c}$  MAC of wing to  $1/4 \bar{c}$  MAC of vertical

A tail volume of 0.8 works well for this application

The vertical tail area should be

$$S_v \approx 0.05 \frac{S \cdot b}{L_v}$$



From Pareto's law, 80% of all performance comes from 20% of factors. So focus on what is important.