

Sky Soaring

Cross-Country Profile Worksheet



Objective: arrive over destination airport at 1000 feet

Step 1: Calculate your gliders cross-country L/D factor:

- take half of your gliders best L/D speed (for example, if best L/D is 34, use 17)

Step 2: Adjust the cross-country L/D factor for wind

- If you have a tailwind add 20% of its value to the to the L/D factor (if tailwind is 10 MPH add 2 i.e. $17+2=19$)

- If you have a headwind subtract 20% of its value from the L/D factor (if headwind is 10 MPH subtract 2 i.e. $17-2=15$)

Step 3: Calculate altitude lost per mile = 5280 divided by the wind adjusted cross-country L/D factor

- tailwind example: $5280/19 = 278$ feet of altitude lost per mile

Step 4: Plot altitude slope line starting at 1000 feet above departure airport towards destination airport

Step 5: Plot altitude slope line starting at 1000 above destination airport back towards starting airport

