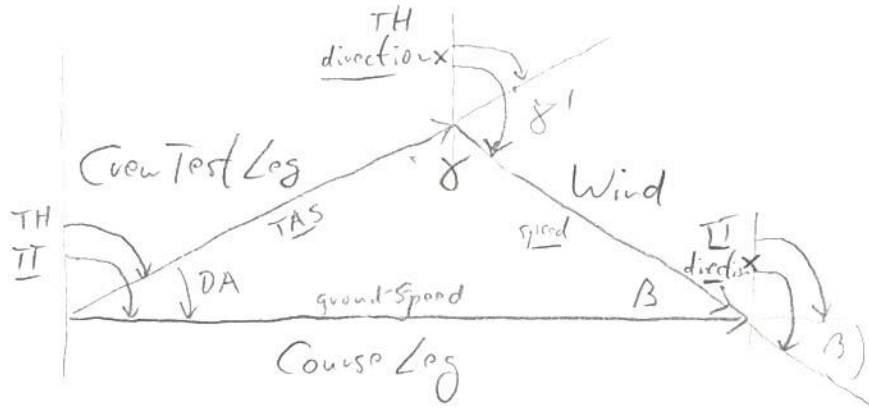


Wind dreieck (1)



Course Log	True Track (TT) distance	ground speed (GS)
0100	100	100
0200	200	100
0300	300	100
0400	400	100
0500	500	100
0600	600	100
0700	700	100
0800	800	100
0900	900	100
1000	1000	100
1100	1100	100
1200	1200	100
1300	1300	100
1400	1400	100
1500	1500	100
1600	1600	100
1700	1700	100
1800	1800	100
1900	1900	100
2000	2000	100
2100	2100	100
2200	2200	100
2300	2300	100
2400	2400	100

Wind direction  $\times$  = direction  $- 180^\circ$   
 speed

Crew Test Log      TAS      |      true Heading (TH)

$$DA = TT - TH$$

$$\delta = 180^\circ - (\text{direction} - TH)$$

$$DA + \beta + \gamma = 180^\circ$$

$$\frac{\text{Speed}}{\sin DA} = \frac{TAS}{\sin \beta} = \frac{GS}{\sin \gamma}$$

$$\gamma = 180^\circ - \text{direction} + TH$$

$$T_H = T_1 - \Delta A$$

$$\gamma = 180^\circ - \text{direction} + \text{IT} - \text{DA}$$

$$DA = 180^\circ + \underline{IT} - \text{direction} - \delta$$

$$DA = 180^\circ + \text{II} - \text{direction} - 180^\circ + \beta + DA$$

1.  $\beta = \text{direction} \times \pi$

$$\delta = 180^\circ - \beta - \angle A$$

## Windvektor (2)

$$\frac{\text{Speed}}{\text{TAS}} = \frac{\sin DA}{\sin \beta}$$

$$\sin DA = \frac{\text{Speed}}{\text{TAS}} \sin \beta$$

$$2. \quad DA = \arcsin \left( \frac{\text{Speed}}{\text{TAS}} \sin \beta \right)$$

$$3. \quad TH = \text{TT} - DA$$

$$4. \quad \gamma = 180^\circ - \text{direction} - \gamma + TH$$

$$5. \quad GS = \text{TAS} \cdot \frac{\sin \gamma}{\sin \beta}$$

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Bsp: direction =  $330^\circ - 180^\circ = 150^\circ$   
Speed = 15 kt  
TT =  $108^\circ$   
TAS = 110 kt

$$1. \quad \beta = 150^\circ - 108^\circ = 42^\circ$$

$$2. \quad DA = \arcsin \left( \frac{15 \text{ kt}}{110 \text{ kt}} \sin (42^\circ) \right) = 5,23^\circ$$

$$3. \quad TH = 108^\circ - 5,23^\circ = 102,76^\circ$$

$$4. \quad \gamma = 180^\circ - 150^\circ + 102,76^\circ = 132,76^\circ$$

$$5. \quad GS = 110 \text{ kt} \frac{\sin 132,76^\circ}{\sin 42^\circ} = 120,7 \text{ kt}$$

$$150^\circ \quad \sin 330^\circ = -0,5$$
$$\sin -30^\circ$$