

8. AIRPLANES (7 points) — *Janis Huns, Jaan Kalda.*

Two airplanes pass each other while flying at a constant altitudes. While they have identical airspeeds, their ground speeds are v_1 and v_2 , respectively, and the angle between the velocity vectors is α . Based on this knowledge, what is the minimal possible value

- i)** (1 point) of the airspeed of the planes;
- ii)** (3 points) of the wind speed at the altitudes of the planes?
- iii)** (3 points) Answer the question ii) if now $v_1 = v_2 = v$, but it is known that the airspeed of one of the planes is two times bigger than that of the other.