

Student Pilot Glider Quiz

Aerodynamics

If your wings-level minimum sink speed was 40, what would your minimum sink speed be while circling at a **30°** bank angle?

- A. 43 (just under 10% higher)
- B. 48 (just under 20% higher)
- C. 56 (about 40% higher)

If your wings-level minimum sink speed was 40, what would your minimum sink speed be while circling at a **45°** bank angle?

- A. 43 (just under 10% higher)
- B. 48 (just under 20% higher)
- C. 56 (about 40% higher)

What bank angle results in the least amount of altitude loss in a 180° turn.

- A. 30°
- B. 45°
- C. 55°
- D. 60°

Minimum sink speed and stall speed are each affected by the same percentage increase in a coordinated turn.

- A. True
- B. False

Adverse Aileron Yaw is best corrected by:

- A. Using aileron and rudder together when rolling into a turn.
- B. Holding aileron and rudder inputs in the same direction during an established turn.
- C. Holding opposite aileron and rudder pressure during an established turn.
- D. Avoiding use of rudder when rolling into a turn.

Select the True statements about flying faster than the still-air best L/D while in sinking air:

- ☐ The time spent in the sinking air is reduced
- ☐ The glide ratio through the sinking air is increased
- ☐ The variometer will show a lower sink rate once the higher speed is established
- ☐ It is better to go a little-to-fast, than a little-to-slow

Compare the glide ratio of a glider while flying solo vs with two persons, assume no wind.

- A. The solo glider will climb better and glide farther than with two persons
- B. The solo glider will climb better but maintain the same glide ratio as with two persons
- C. The solo glider will climb and glide at the same rate as with two persons.
- D. The solo glider will climb better but NOT glide as far as with two persons.

Compare the glide ratio of a glider while flying solo vs with two persons, assume a headwind exists.

- A. Glide performance will be unchanged as weight does not affect glide ratio
- B. Glide performance will be better solo, because the glider is lighter
- C. Glide performance will be worse solo, because the headwind will be a larger percentage of your best glide speed at the solo weight
- D. Glide performance will be unchanged as long as the Best L/D speed for two persons is used.

The Airspeed indicator is a reliable means to detect and avoid stalls:

- A. True: Stall speeds are highly predictable and airspeed is a good way to determine if a stall is imminent
- B. False: Stall speeds vary with weight, load factor, gusts, and instrument error factors that are hard to accurately consider in flight.

As altitude increases the glider's True Airspeed will be greater than its Indicated Airspeed. You know that Performance speeds (best glide, minimum sink, etc)

- A. Should still be based on the indicated airspeed number
- B. Should be adjusted for the effects of true airspeed at the rate of 2% / 1000 ft