

BEFA Initial Quiz: BE76 Duchess, N2008E

1. Identify the published indicated value (at maximum gross weight) for the following V-speeds:

Name	Value	Meaning
Vs0	_____	Power-off stall in landing configuration
Vs1	_____	Power-off stall (gear and flaps up)
Vmc	_____	Air minimum control speed with engine inoperative
Vsse	_____	Safe single engine speed
Vr	_____	Rotation speed
Vx	_____	Best all engine angle of climb
Vxse	_____	Best single engine angle of climb
Vy	_____	Best all engine rate of climb
Vyse	_____	Best single engine angle of climb
	_____	Recommended cruise climb speed
	_____	Maximum glide speed
Va	_____	Maneuvering speed
	_____	Emergency descent
Vno	_____	Maximum structural cruising speed
Vne	_____	Never exceed speed
Vle	_____	Maximum speed landing gear extended
Vlo	_____	Maximum speed landing gear operating
Vfe	_____	Maximum speed flaps in landing position
	_____	Landing Approach flaps up
	_____	Landing Approach flaps down
	_____	Balked landing climb
	_____	Maximum demonstrated crosswind component

2. To transition to published cruise climb at 500', what are the POH specified values for:

_____ MP
 _____ RPM

3. To use a power setting on takeoff at 500' over noise sensitive areas at 2,400 RPM with the maximum MP in the "recommended values of MP and RPM for cruise power setting" section of the POH MP and RPM performance chart, one would use:

_____ MP

4. Per POH restrictions, Vmc demonstrations may not be performed below what altitude AGL? _____

5. Per BEFA rule restrictions, Power Off/Power On stalls and Slow Flight may only be performed under what conditions? _____

The minimum altitude for these maneuvers in the FAA Practical Test Standards is _____' AGL.

6. A BEFA pilot is planning to depart paved, level, dry runway at an airport, 4,000' Pressure Altitude, 30° C, 3,600 pounds, with a 10 knots headwind over a 50' obstacle. The following performance figures may be expected:

_____ Ground Roll
_____ Total distance over 50-foot obstacle
_____ Accelerate-stop distance
_____ Two-engine climb rate

If an engine were to fail shortly after takeoff, the following performance figures may be expected:

_____ Climb (or descent) rate feet per minute at 85 knots
_____ Service ceiling

7. A BEFA pilot is planning to depart Renton on a standard day with a 10 knots headwind at 3,600 lbs. The following performance figures may be expected:

_____ Accelerate-go distance (over 50' obstacle)

8. A BEFA pilot is planning to depart Renton on a standard day with a 10 knots headwind. What is the maximum weight at which an accelerate-go procedure is suggested by the POH? _____ Pounds

9. You are planning to depart with a 200lbs BEFA CFI and full fuel. Using the actual empty weight and CG locations from N2008E, what are the following weight and balance values:

_____ Your weight
_____ Empty weight
_____ Empty CG
_____ Ramp weight
_____ Takeoff weight
_____ Forward CG limit at takeoff weight
_____ Takeoff CG
_____ Aft CG limit at takeoff weight

10. Considering the zero fuel weight restriction on N2008E, what is the maximum total weight of passengers and baggage? _____ pounds
If the aircraft were loaded with this load, what would be the maximum fuel quantity that could be in the tanks at takeoff? _____ Gallons

11. A BEFA pilot is planning to cruise at 3,600 pounds at 8,000' pressure altitude on a standard day using Full Throttle and 2,300 RPM. What performance figures may be expected:

_____ MP _____ Fuel Flow per engine per hour
_____ IAS _____ TAS

12. At what pressure altitude should a BEFA pilot fly to obtain maximum true airspeed at recommended cruise power settings? _____
 At 2,500 rpm, the true airspeed that would be expected at this altitude would be _____ knots, and the total fuel flow would be _____ gallons per hour.
13. Assuming a standard day cruise climb at 100 knots per the POH recommendations and assumptions to the altitude in question 11, the time, fuel consumption, and distance for engine start, taxi, takeoff and the climb would be:
 _____ Climb minutes
 _____ Climb gallons
 _____ Climb nautical miles
 And if planning a landing with 20 gallons reserve, the range would be:
 _____ Cruise minutes
 _____ Cruise nautical miles
14. The expected landing distance over a 50' obstacle at a pressure altitude of 4,000', 30° C, with a 10 knots headwind is: _____ feet
15. What is the approved maximum duration of a slip? _____ seconds
16. The emergency procedure for engine failure during ground roll is:
1. _____
 2. _____
 3. _____
 4. _____
17. Under what conditions can the fuel crossfeed system be used:

18. What is the procedure for landing gear manual extension:
1. _____
 2. _____
 3. _____
 4. _____
 5. _____

19. The recommended mixture settings, as indicated via the EGT, for level flight at 75% power or less are:
 °F to °F rich of peak for best economy mixture
 °F to °F rich of peak for best power mixture
20. The procedure relative to the parking brake if the airplane is to be left unattended is to:
1. _____, then
 2. _____
21. The source and fuel consumption rate for the cabin heater is:
 _____ (Left, Right or Both) tank(s)
 _____ Gallon per hour
22. The total number of fuel drains is: _____
23. The electrical system consists of a _____ volt _____ ampere-hour battery, and two _____ volt _____ ampere alternators.
24. What are two purposes for the heater control marked CABIN AIR – PULL OFF?

25. For unheated ventilation air while on the ground, the positions of the controls are:
 _____ Cabin Air
 _____ Cabin Temp
 _____ Three-position blower control switch
26. Tire pressures are:
 _____psi Main tires
 _____psi Nose tire