



AIRCRAFT KNOWLEDGE/PRE-SOLO TEST - C-172N

Name: _____

Date: _____

Note: Use the POH to help answers the questions in this test. A copy of the POH can be found at <http://www.nwflightservice.com/rental>

1. Maximum Gross Take-Off Weight _____ Normal Category/ _____ Utility
2. What is the Maximum Ramp Weight _____ Normal
3. Engine Max rated BHP. _____ @ _____ RPM
4. Maximum passenger and baggage load with full fuel _____
5. What type of oil is used _____
6. Minimum engine oil level _____. Maximum engine oil level _____
7. Max Continuous RPM _____
8. Max Useable Fuel _____
9. Unusable Fuel _____
10. What type of fuel can be used and what color is it _____
11. How many Positions on the Fuel Selector _____
12. How many and where are the fuel Drains

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13. Max Flap Travel _____
 14. Location of Static Port _____
 15. Is there an Alternate Static Source and if so where is it located

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16. What instruments are affected if the Pitot tube is blocked? _____
 17. What instruments are affected if the Static port is blocked? _____
 18. What instruments are affected if the vacuum pump fails: _____
 19. What is the Voltage and Amperage rating for the alternator _____ V, _____ A
 20. What is the Voltage rating of the Battery _____ V
 21. What is the engine restart checklist in case of an engine failure in flight: _____

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22. What is the tire pressure for the main wheels _____ psi Nose wheel _____ psi
 23. What is the normal climb speed: _____



24. What is the normal approach speed with full flaps: _____

25. Define the following airspeeds and their associated values:

VNE: _____ Kts
 VNO: _____ Kts
 VFE: _____ Kts (10 degrees flaps) _____ Kts > 10 Degrees
 Vx: _____ Kts
 Vy: _____ Kts
 Vso: _____ Kts
 Vs1: _____ Kts
 Va: _____ Kts (2400 lbs) _____ Kts (1950 lbs)
 Emergency Glide Speed: _____ (Flaps up) _____ (Full Flaps)

26. Determine the amount of fuel you can take on to keep Weight and Balance within limits:
(Use a separate piece of paper)

Front Seats	200 Pilot	180 Passenger
Rear Seats	175	125
Baggage	60	

Fuel _____ Lbs Weight _____ Gals
 Takeoff Weight _____ Moment _____ CG _____

Given: Departure GEG Temperature: 30°C Altimeter setting: 29.72 Wind Calm

27. Calculate Takeoff Distance over 50' obstacle: _____

28. If climbing to 6500' list the Time/Distance/Fuel to reach Top of Climb:
 _____ Minutes _____ Miles _____ Gallons

29. What will be the cruise performance at 6000' pressure altitude if you use 2400 RPM at Standard Temperature:

% BHP _____ True Airspeed _____ Fuel Rate _____ GPH

30. Based on the answers of the previous 2 questions and the fuel calculated from the weight and balance question list the ground speed and how far can you fly and still have the VFR daytime Fuel Reserve.

Given: Winds Aloft: 220 @ 15 True Heading: 180

Ground Speed: _____ Distance: _____ Nm

31. What is the landing distance over a 50' obstacle (Field elevation 3000', Temp 30° C, Wind calm)
 _____ Feet