

VFC INITIAL & ANNUAL CHECK RIDE EXAM – 1 JANUARY – 31 DECEMBER 2024

Pilot: _____

Date: _____

Instructor: _____

This exam is divided into three parts. Part:

- one contains 13 questions and is to be completed by all pilots;
- two contains 7 questions and is to be completed by all who fly our 172 models; and
- three contains 7 questions and is to be completed by all who fly the Arrow.

PART ONE – GENERAL KNOWLEDGE

1. You are flying overhead CYCD enroute CAT4, following the published CYCD VTPC from Yellow Point to the Gravel Pit. What is the upper altitude for this procedure? _____ Does this procedure provide for any altitude separation for opposite direction traffic? _____ (CFS)

2. Before departing CAT4 and returning to CYYJ you check the "Live RVR" and see the winds are 220° at 10 gusting 25. Your calculations show the runway 27 headwind gust component is _____ knots and the runway 27 gust crosswind component is _____ knots from the _____.

3. If you are uncomfortable with these winds and they are still as published when you arrive back in CYYJ, what option do you have? _____

4. As you approach CYYJ from CAT4 and get CYYJ's ATIS, you note the winds are now "260° @ 7 knots". What arrival can you plan for, given you're flying VFR and the weather is VFR? _____ How do you fly this arrival and what do you expect Inner Tower to give you by way of a clearance at the Inner Report Point? _____

5. When there are multiple aircraft in the circuit and you are instructed to follow the aircraft ahead, but that aircraft has been told to climb runway heading to 1000' before turning crosswind, at what point can you turn? _____

6. If you are given an instruction to hold short of a runway, what info MUST be read back? _____

7. You are on final approach and Tower directs: "...for wake turbulence, make this a Low Approach. Cleared for the Low Approach only runway [number]" What does this authorize you to do and how low can you legally descend? How low would you descend? _____

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8. If you are given a hold short clearance to a crossing runway, how should you approach the hold short line? _____

9. If the code you have from Kamloops FIC differs from the code issued by Victoria's Clearance Delivery, which one should you use? _____

10. If you are on the left downwind for runway 27 abeam Mt. Newton and you are asked to orbit what should you do? _____

11. The CARs prohibit takeoff when frost, ice or snow is adhering to any critical surface of the aircraft. In the case of all VFC aircraft what are "critical surfaces"? (CAR 602.11 (2)) _____

12. What is the purpose of the "four corners check" during your pre-start pre-flight checks?

13. What three types of landing errors can result in a 'hard landing' and what must you do if you experience a hard landing? (From The Ground Up, 29th Ed, pg. 292) _____

PART TWO – CESSNA 172 QUESTIONS

14. GKMY has a manually operated "ALT AIR" system. What is fitted in our S model fleet in place of this? (POH 7-22) _____

15. An open "ALT AIR" door in GKMY or any of our S models will result in an approximate ___% loss in power at full throttle. (POH 7-22)

16. You are flying from CYYJ to CYBL and plan VFR direct from Separation Point to Campbell River at 6500' AMSL. Assuming zero wind, what is the maximum distance you can glide if you have a total engine failure at 6500' AMSL? _____. And at 2500' AMSL? _____ (POH 3-14)

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17. Calculate and plot a Weight & Balance (W&B) for C-GUPA using the following weights and the attached POH W&B Form (POH Section 6):

- a. Basic Empty Weight – 1440.2, moment 56191.0;
- b. pilot and passenger – 375 pounds total;
- c. rear passengers – 250 pounds total; and
- d. 84.8 pounds baggage.

Can you take full fuel? _____. How much fuel can you safely take? _____.

18. How does the calculated CofG from question 17 affect GUPA's flight performance versus when it is lightly loaded? (FTGU, 29th Ed, pg. 272) _____

19. What is the minimum Day VFR reserve fuel requirement for a 172S with the following flight profile: 7000' PAlt, 20°C Above Standard Temp, 2300 rpm? _____ (POH 5-19/5-20)

20. Assuming a 172S with a takeoff weight of 2405 pounds calculate the Short Field Takeoff Distance Ground Roll _____ and Total Distance to Clear a 50' Obstacle _____ at an airport with only one grass runway (09/27), a calculated Pressure Altitude of 4500', a temperature of 35°C and a pilot-observed wind of 090° at 9 knots. (POH Figure 5-5)

PART THREE – PIPER ARROW QUESTIONS

21. Calculate and plot a Weight & Balance (W&B) for C-FUHA using the following weights and the attached VFC W&B Form: (POH Section 5)

- a. pilot & front pax – 420 pounds;
- b. rear passengers – 340 pounds; and
- c. 41 USG useable fuel.

How much baggage can be safely carried in the baggage area? _____

22. How does the calculated CofG from question 21 affect FUHA's flight performance versus when it is lightly loaded? (FTGU, 29th Ed, pg. 272) _____

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23. What is the maximum percentage of Full Power at which one can start to lean the Arrow when below 5000'? _____ (POH 6-6)
24. The published Density Altitude is 2000'. What is the maximum Rate of Climb you can expect at MTOW? _____ (POH 8-3).
25. What is the published takeoff distance over a 50' obstacle, using 25° flaps, at MTOW with a DAIt of 1000'? (POH 8-2) _____ What is the length of the runway at CAH3? _____
26. Complete the following table. (POH 6-5)

Angle of Bank	Flaps 0°	Flaps 40°
0°	KTS	KTS
20°	KTS	KTS
40°	KTS	KTS
60°	KTS	KTS

27. You select "GEAR DOWN" but don't get "THREE GREEN". What do you do? (POH 4-5)
-
-
-
-
-
-
-
-

ATTACHMENTS: (2)

- C-GUPA Weight & Balance Form
- C-FUHA Weight & Balance Form

SAMPLE LOADING PROBLEM	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb. - ins. /1000)	Weight (lbs.)	Moment (lb. - ins. /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil)	1454	57.6	1440.2	56191.0
2. Usable Fuel (At 6 Lbs./Gal.) Standard Tanks (40 Gal. Maximum)	240	11.5		
Long Range Tanks (50 Gal. Maximum)				
3. Pilot and Front Passenger (Station 34 to 46)	340	12.6		
4. Rear Passengers	170	12.4		
5. * Baggage Area 1 or Passenger on Child's Seat (Station 82 to 108) 120 Lbs. Max.	96	9.1		
6. * Baggage Area 2 (Station 108 to 142) 50 Lbs. Max				
7. TOTAL WEIGHT AND MOMENT	2300	103.2		
8. Locate this point (2300 at 103.2) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.				

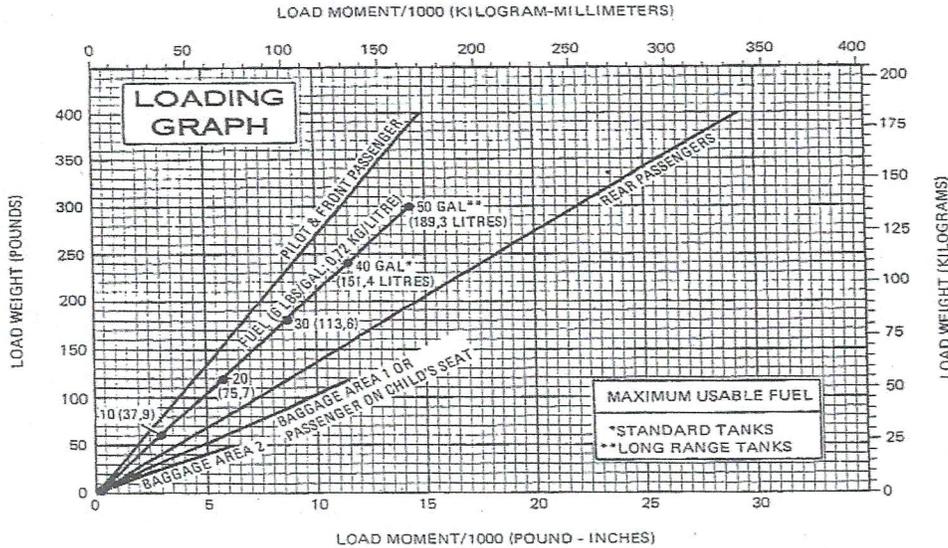
NOTE

* The maximum allowable combined weight capacity for baggage areas 1 and 2 is 120 lbs.

Figure 6-5. Sample Loading Problem

CESSNA
MODEL 172N

SECTION 6
WEIGHT & BALANCE/
EQUIPMENT LIST



NOTE: Line representing adjustable seats shows the pilot or passenger center of gravity on adjustable seats positioned for an average occupant. Refer to the Loading Arrangements diagram for forward and aft limits of occupant C.G. range.

Figure 6-6. Loading Graph

SECTION 6
WEIGHT & BALANCE/
EQUIPMENT LIST

CESSNA
MODEL 172N

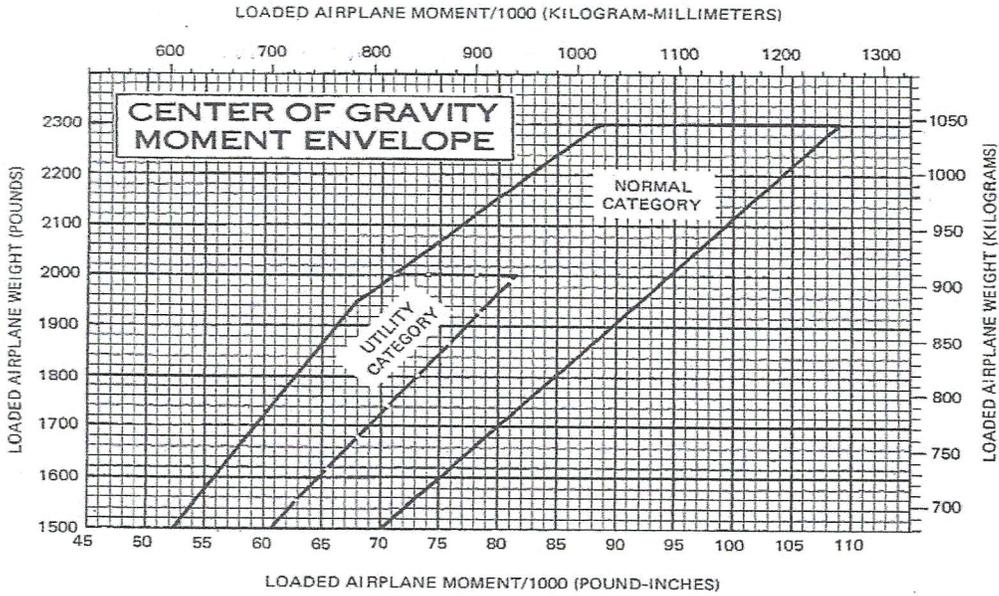


Figure 6-7. Center of Gravity Moment Envelope

CESSNA
MODEL 172N
SECTION 6
WEIGHT & BALANCE/
EQUIPMENT LIST

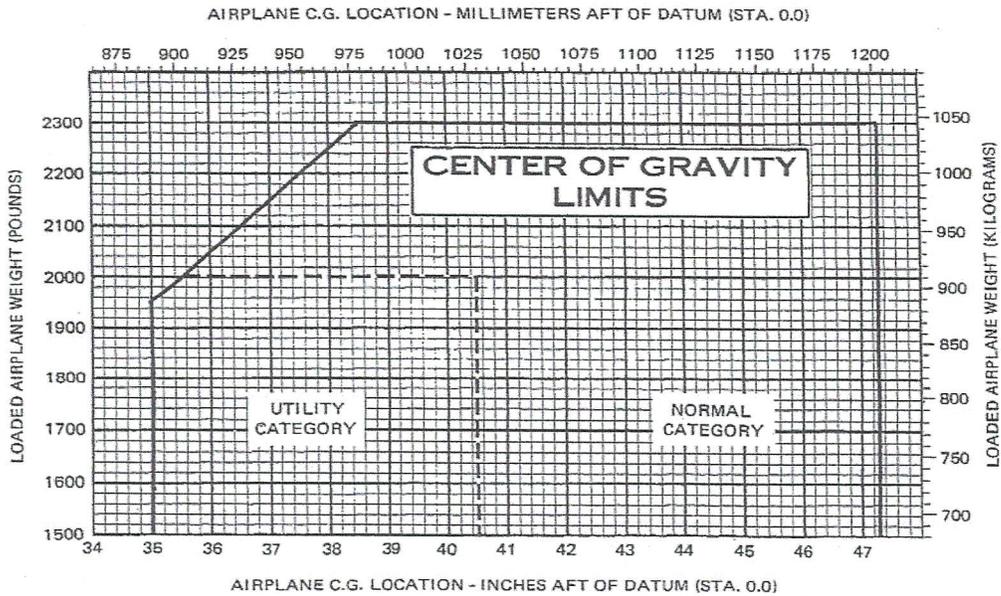


Figure 6-8. Center of Gravity Limits

SECTION 6
WEIGHT & BALANCE/
EQUIPMENT LIST
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MODEL 172N

VFC INITIAL/ANNUAL CHECK RIDE EXAM – 1 JANUARY – 31 DECEMBER 2024 VFC 71 – REV 3
VICTORIA FLYING CLUB

PIPER PA-28-200 ARROW II C-FUHA WEIGHT & BALANCE

TAKE-OFF WEIGHT & BALANCE

	WEIGHT	ARM	MOMENT
BASIC EMPTY WEIGHT	1643		137,766.42
PILOT & PASSENGER			
REAR PASSENGER			
BAGGAGE AREA 1			
BAGGAGE AREA 2			
FUEL LOAD			
RAMP/TAKEOFF WEIGHT			

TAKE-OFF WEIGHT & BALANCE

	WEIGHT	ARM	MOMENT
BASIC EMPTY WEIGHT	1643		137,766.42
PILOT & PASSENGER			
REAR PASSENGER			
BAGGAGE AREA 1			
BAGGAGE AREA 2			
FUEL LOAD			
RAMP/TAKEOFF WEIGHT			

LANDING WEIGHT & BALANCE

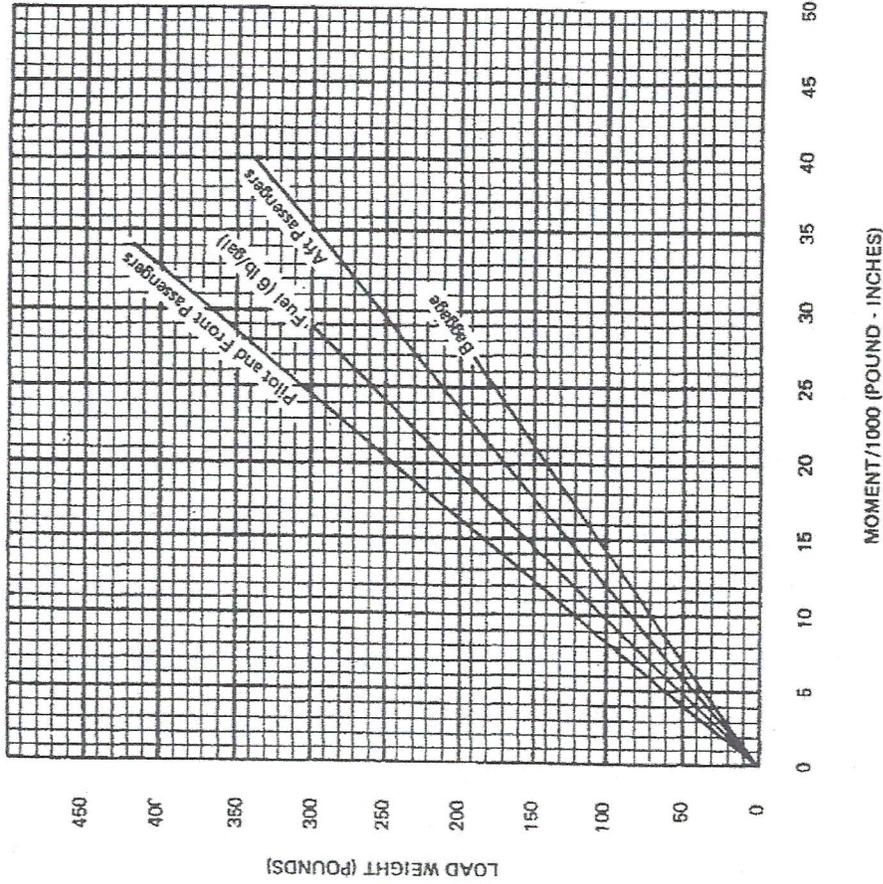
	WEIGHT	ARM	MOMENT
BASIC EMPTY WEIGHT	1643		137,766.42
PILOT & PASSENGER			
REAR PASSENGER			
BAGGAGE AREA 1			
BAGGAGE AREA 2			
FUEL LOAD			
RAMP/TAKEOFF WEIGHT			

LANDING WEIGHT & BALANCE

	WEIGHT	ARM	MOMENT
BASIC EMPTY WEIGHT	1643		137,766.42
PILOT & PASSENGER			
REAR PASSENGER			
BAGGAGE AREA 1			
BAGGAGE AREA 2			
FUEL LOAD			
RAMP/TAKEOFF WEIGHT			

PIPER PA-28-200 ARROW II C-FUHA WEIGHT & BALANCE

LOADING GRAPH



C.G. RANGE AND WEIGHTS

