

Name: _____

Date: _____

CFI: _____



1. List the following for all aircraft you intend to fly:

	N992VT	N9698V	N785BG	N738PV	N73345	N364SP
Service Ceiling	14,000	13,100	13,500	14,200	13,100	14,000
Max Gross Takeoff Weight	2550	2550	2550	2300	2300	2550
V _X	62	64	62	59	64	62
V _Y	73	78	74	72	78	74
V _A	105	105	105	97	97	105
V _{S0}	40	40	40	41	41	40
V _{S1}	48	50	48	47	48	48
V _{FE}	110/85	85	110/85	85	85	110/85
V _{NO}	129	127	129	128	128	129
V _{NE}	163	158	163	160	160	163
Approach Speed (Full Flaps)	60-70	60-70	60-70	60-70	60-70	60-70
Approach Speed (Clean)	65-75	65-75	65-75	65-75	65-75	65-75
Best Glide	68	65	65	65	65	68
Oil Capacity (Max, Min, Type)	8,6, 20w50	8,6, 20w50	8,6, 20w50	8,6, 20w50	8,6, 20w50	8,6, 20W50
Fuel Capacity	56	66	56	43	42	56
Takeoff Distance Over 50' (KBTW, 15°C, 29.92", 5KT Tailwind)	Approx. 2136	Approx. 1825	Approx. 2215	Approx. 1935	Approx. 1825	Approx. 2040
Short Field Landing Distance (Using Above Variables)	Approx. 1686	Approx. 1500	Approx. 1639	Approx. 1583	Approx. 1500	Approx. 1664
Takeoff Flap Setting for Short or Soft	Short-10 Soft-10	Short- 0 Soft- 10	Short- 10 Soft- 10	Short- 0 Soft- 10	Short- 0 Soft- 10	Short- 10 Soft- 10
Maximum Demonstrated Crosswind	15	15	15	15	15	15

	N298ME	N64AF	N959JA	N543TH	N6482M
Service Ceiling	14,000	13,500	14,000	14,000	14,700
Max Gross Takeoff Weight	2550	2550	2550	2550	1670
V _X	62	62	62	62	55
V _Y	74	74	73	73	67
V _A	105	105	105	105	98
V _{S0}	40	40	40	40	35
V _{S1}	48	48	48	48	40
V _{FE}	110/85	110/85	110/85	110/85	85
V _{LO}					
V _{LE}					
V _{NO}	129	129	129	129	111
V _{NE}	163	163	163	163	149
Approach Speed (Full Flaps)	60-70	60-70	60-70	60-70	55-65
Approach Speed (Clean)	65-75	65-75	65-75	65-75	60-70
Best Glide	68	65	68	68	60
Oil Capacity (Max, Min, Type)	8,6 20W50	8,6, 20w50	8,6 15w50	8,6, 20w50	7,5, 20w50
Fuel Capacity	56	56	56	56	26
Takeoff Distance Over 50' (KBTV, 15°C, 29.92", 5KT Tailwind)	Approx 2041	Approx. 2136	Approx. 2136	Approx. 2136	Approx. 1675
Short Field Landing Distance (Using Above Variables)	Approx 1670	Approx. 1686	Approx. 1689	Approx. 1689	Approx. 1506
Takeoff Flap Setting for Short or Soft	10	Soft- 10 Short- 10	Soft- 10 Short- 10	Soft- 10 Short- 10	Soft-10 Short-10
Maximum Demonstrated Crosswind	15	15	15	15	12

	N991VT	N990VT	N5673T	N425CE	N956GV	
Service Ceiling	15,000	14,300	14,000	13,110	14,000	
Max Gross Takeoff Weight	2750	2150	1320	1320	2711	
V _X	78	74 MPH	62	60	78	
V _Y	90	85 MPH	65	68	85	
V _A	96-118	129 MPH	98	96	122	
V _{S0}	55	55 MPH	37	26	54	
V _{S1}	60	64 MPH	43	39	66	
V _{FE}	103	115 MPH	70	67	122 (T/O) 93 (full)	
V _{LO}	107				93	
V _{LE}	129				93	
V _{NO}	146	140 MPH	113	110	138	
V _{NE}	183	171 MPH	145	138	171	
Approach Speed (Full Flaps)	75	76 MPH	50-60	50-60	70	
Approach Speed (Clean)	82	83 MPH	55-65	55-65	70	
Best Glide	79	83 MPH	65	68		
Oil Capacity (Max, Min, Type)	8,6 20W50	8,6 20W50	3,2 Sport Plus 4	3,2 Sport Plus 4	3,2 Sport Plus 4	
Fuel Capacity	77	50	23.76	26.4	56	
Takeoff Distance Over 50' (KBTV, 15°C, 29.92", 5KT Tailwind)	Approx. 2000	Approx. 1900	Approx. 1306 ft (398 m)	Approx. 902 ft (275 m)	Approx. 1368 ft (417 m)	
Short Field Landing Distance (Using Above Variables)	Approx. 1700	Approx. 1400	Approx. 1148 ft (350 m)	Approx. 869 ft (265 m)	Approx. 1299 ft (396 m)	
Takeoff Flap Setting for Short or Soft	25	25	15	15	T/O	
Maximum Demonstrated Crosswind	17	17	15	15	17	

1. Determine for the following conditions for an airplane of intended use:

PA – 6000’
 Temp – ISA + 10° C
 Power – 65%

TAS –
 Fuel Flow –
 Endurance –

2. Determine the Weight and Balance for an airplane of intended use

N-Number: _____

Location	Weight	Arm	Moment
Basic Empty Weight			
Pilot & Front Passenger			
Rear Passengers			
Baggage			
Fuel			
Total			

3. What is the procedure for setting the autopilot to fly a heading? (GFC 500 equipped aircraft only)

Set Heading bug, auto pilot on, select heading mode

4. What does ESP do on the Garmin G5? (GFC 500 equipped aircraft only)

Prevents inadvertent low or high pitch attitudes and limits bank angles. Can turn off on G5 or G3X

5. What is the process to shut off the autopilot? (GFC 500 equipped aircraft only)

Press the AP disconnect on the yoke or the AP button on the GFC 500, then push off the FD if desired

6. What is the procedure for a pitch trim runway?(autopilot equipped aircraft only)
Pull the Pitch Trim circuit breaker

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7. What is the appropriate propeller pitch setting for takeoff? (Complex aircraft only)
Full forward, Low pitch high RPM
 8. Briefly describe the prop governor system. (Complex aircraft only)
The governor moves oil back and forth through the propeller hub to make sure the prop is at the pitch and speed that you want
 9. In a single engine complex aircraft, when should the gear be raised? (Complex aircraft only)
Positive rate, out of runway
 10. How does the landing gear system operate on the Arrow? (Complex aircraft only)
Hydraulically actuated by an electrically driven reversible hydraulic pump. When the gear is selected up or down, the pump runs in the direction selected until the gear reaches the selected position.
 - a. How long does it take for the gear to be raised or lowered?
About 7 Seconds
 - b. How is the gear held up?
Hydraulic Pressure
 - c. How is the gear kept down?
Over-center elbows
 - d. How is gear retraction prevented on the ground?
A weight on wheels switch located on the left main gear
 11. What is the procedure if the gear pump is continuously operating in the Arrow?
Pull the LG PUMP circuit breaker, follow the emergency gear extension checklist
 12. What is the procedure for the Emergency Gear extension in the Arrow?
MASTER VERIFY ON
CIRCUIT BREAKERS IN
LDG GEAR IND. LIGHTS DAY
LDG GEAR IND. BULBS CHECK
AIRSPEED BELOW 87 KIAS
LDG GEAR SELECTOR DOWN
EMERG. GEAR SEL HOLD DOWN
LDG GEAR INDICATOR 3 GREEN
 13. If oil pressure were lost in the Arrow, how would that effect the pitch of the propeller?
The propellor would go to its fine pitch, high RPM position
 14. What flow should be used in the Arrow to determine all appropriate items are completed before landing?
Boost Pump-On
Gas-Fullest-Tank
Undercarriage-Down Three Green
Mixture-Full Rich
Propellor-Full Forward
Safety Belts-On
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