



Cross Country Time Building

Nine lessons to meet important requirements of the instrument and commercial ratings while building your cross country experience.

XC 1 to XC 9 • Piper Warrior N41459 • KSNS

Version 1.1 • October 2026

STUDENT

START DATE

INSTRUCTOR

OVERVIEW

The 50-hour requirement

The instrument rating requires 50 hours of PIC cross-country time (14 CFR 61.65(d)(1)). The commercial certificate requires the same 50 hours (14 CFR 61.129(a)(2)(ii)). The same hours count for both.

A flight counts as cross-country time only if it lands more than 50 nm straight-line from the original departure point (14 CFR 61.1).

These nine lessons also fly the four cross-country flights that the commercial certificate requires. Those hours count toward the 50 hours too.

WHERE THE HOURS COME FROM

SOURCE	LESSONS	PIC XC HOURS
These nine lessons	XC 1 to XC 9	34.5
Instrument training	IR Lesson 20 (IFR cross-country) and IR Lesson 22 (IFR long cross-country)	6.0
Total		40.5

PIC cross-country time already in the logbook gives the other 9.5 hours. If the logbook has less, add solo cross-country flights. Each flight must land more than 50 nm straight-line from KSNS.

Routes are suggestions. Any route that meets the route criteria for the lesson is acceptable. Planned hours are estimates. The logbook is the record.

WHEN TO FLY THESE LESSONS

- Start before IR Lesson 1 (introduction to instrument risk management and preflight).
- Solo cross-country flights can continue during instrument training.
- The logbook must show 50.0 hours before the instrument checkride.

HOW TO LOG PIC TIME

- Dual lessons (XC 1 and XC 4): log PIC time as the sole manipulator of the controls (14 CFR 61.51(e)(1)(i)).
- Solo lessons: log PIC time as the sole occupant (14 CFR 61.51(e)(1)(ii)).
- Record the date, flight time, every departure and landing point, and the type of experience (14 CFR 61.51(b)).
- Record every flight in the ledger on page 5.

TARGET BEFORE IR LESSON 20

The target is **44.0 hours or more** of PIC cross-country time before IR Lesson 20 (IFR cross-country). IR Lessons 20 and 22 add 6.0 hours for a total of 50.0. If IR Lesson 20 does not land more than 50 nm from KSNS, the target is **46.4 hours**.

REQUIREMENTS

Commercial cross-country requirements

REQUIREMENT	14 CFR	LESSON
Day cross-country: 2 hours, more than 100 nm straight-line	61.129(a)(3)(iii)	XC 1 (suggested: L52, 105.1 nm)
Night cross-country: 2 hours, more than 100 nm straight-line	61.129(a)(3)(iv)	XC 4 (suggested: KSAC, 111.0 nm)
Long cross-country: 300 nm, 3 landing points, one at least 250 nm straight-line	61.129(a)(4)(i)	XC 8 (suggested: KCNO, 252.8 nm)
Night VFR: 5 hours, 10 takeoffs and 10 landings at a towered airport	61.129(a)(4)(ii)	XC 5 and XC 6 (any towered airport)
50 hours PIC cross-country (commercial)	61.129(a)(2)(ii)	Ledger
50 hours PIC cross-country (instrument)	61.65(d)(1)	Ledger, before the IR checkride

The instrument rating also requires one IFR cross-country of 250 nm or more (14 CFR 61.65(d)(2)(ii)). That flight stays in IR Lesson 22 (IFR long cross-country). It also counts toward the 50 hours.

THE NINE LESSONS

XC	LESSON	SUGGESTED ROUTE	FARTHEST NM	GROUND	DUAL	SOLO
1	Commercial Day Cross-Country (Dual)	KSNS → L52 → KSNS	105.1	2.0	3.5	0.0
2	Solo Cross-Country: Central Coast	KSNS → KLPC → KIZA → KSBP → KSNS	144.1	0.5	0.0	4.0
3	Solo Cross-Country: Central Valley and Class C	KSNS → KBFL → KVIS → KFAT → KSNS	144.2	0.5	0.0	4.0
4	Commercial Night Cross-Country (Dual)	KSNS → KSAC → KSNS	111.0	2.0	3.0	0.0
5	Solo Night Cross-Country: Tower Pattern Work 1	KSNS → KSAC → KSNS	111.0	1.0	0.0	3.0
6	Solo Night Cross-Country: Tower Pattern Work 2	KSNS → KSMX → KSNS	119.6	0.5	0.0	3.5
7	Solo Cross-Country: North Bay and Class B	KSNS → KUKI → KSTS → KAPC → KSNS	165.9	0.5	0.0	4.5
8	Commercial Long Solo Cross-Country	KSNS → KSMX → KCNO → KSNS	252.8	1.5	0.0	6.0
9	Solo Cross-Country: Unknown Destination	Assigned at the briefing	>50	1.0	0.0	3.0
Total				9.5	6.5	28.0

Planned solo night time: 6.5 hours (XC 5 and XC 6). The requirement is 5.0 hours.

COST

Hours and cost

ITEM	HOURS	RATE	COST
Ground instruction	9.5	\$160/hr	\$1,520
Dual flight (Warrior and instructor)	6.5	\$360/hr	\$2,340
Solo flight (Warrior)	28.0	\$200/hr	\$5,600
Total			\$9,460

Flight time is 34.5 hours. Ground time is 9.5 hours. This cost is an estimate, not a quote. It uses the published rates: Warrior \$200/hr on the hour meter and instruction \$160/hr.

Planned hours use a 100 kt groundspeed plus 0.2 hours for each landing. Wind, airspace, and fuel stops change the real time.

NIGHT TOWER AIRPORTS

XC 5 and XC 6 need 10 takeoffs and 10 landings at night at an airport with an operating control tower (14 CFR 61.129(a) (4)(ii)). Night starts at the end of evening civil twilight (14 CFR 1.1). The months below give time to fly there and do about 35 minutes of pattern work before the tower closes.

AIRPORT	NM FROM KSNS	TOWER HOURS (LOCAL)	MONTHS	LESSONS
KSAC Sacramento Executive	111.0	0600-2100	October to early March	XC 4 and XC 5
KSMX Santa Maria Public	119.6	0600-2000	November to mid-February	XC 6
KCCR Buchanan Field (Concord)	82.4	0700-2200	Mid-August to early May	XC 5 or XC 6

These airports are suggestions. Any airport with an operating control tower is acceptable. The KSNS tower closes at 1900. The KMRY tower closes at 2100. Pattern work at KSNS or KMRY counts for the tower requirement. It counts as cross-country time only if the same flight also lands more than 50 nm from the original departure point.

DATA SOURCES

Distances are straight-line distances between FAA airport reference points (FAA data effective October 1, 2026). Tower hours come from the same FAA data. Check the current Chart Supplement and NOTAMs before each flight. Civil twilight times are for the 1st and 15th of each month, with daylight saving time.

STUDENT RECORD

Cross-country ledger

Record every flight that counts. The logbook is the official record. Use this ledger to track the totals.

STUDENT

START DATE

PIC XC ALREADY LOGGED (HR)

DATE	LESSON	LANDING POINTS	FARTHEST NM	PIC XC HR	SOLO NIGHT HR	TWR NIGHT TO/LDG	CFI
Totals (include the hours already logged)							

COMMERCIAL REQUIREMENTS

- ☐ XC 1: day cross-country, 2 hours, more than 100 nm straight-line 61.129(a)(3)(iii) Date _____ CFI _____
- ☐ XC 4: night cross-country, 2 hours, more than 100 nm straight-line 61.129(a)(3)(iv) Date _____ CFI _____
- ☐ XC 8: long cross-country, 300 nm, 3 landing points, one at least 250 nm straight-line 61.129(a)(4)(i) Date _____ CFI _____
- ☐ XC 5 and XC 6: 5.0 hours solo night, 10 takeoffs and 10 landings at a towered airport 61.129(a)(4)(ii) Date _____ CFI _____
- ☐ Target: 44.0 hours PIC cross-country before IR Lesson 20 (46.4 if IR Lesson 20 does not land more than 50 nm from KSNS) 61.65(d)(1) Date _____ CFI _____

Commercial Day Cross-Country (Dual)

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
SUGGESTED ROUTE (OPTIONAL)		FARTHEST LANDING	ROUTE DISTANCE	
KSNS → L52 → KSNS		105.1 nm	210.2 nm	

Route criteria: Day. 2.0 hr or more. A landing more than 100 nm straight-line from KSNS.

Counts toward: 61.129(a)(3)(iii): commercial day cross-country. PIC cross-country time toward the 50 hours.

OBJECTIVE

The student plans and flies the commercial day cross-country with an instructor. The flight lasts at least 2.0 hours and lands more than 100 nm straight-line from KSNS. The suggested destination is Oceano County (L52), 105.1 nm from KSNS. This flight meets 14 CFR 61.129(a)(3)(iii). The student is the sole manipulator of the controls, so the flight also logs as PIC cross-country time. The ground brief starts the cross-country ledger.

Ground: 2.0 hr | Dual: 3.5 hr | Solo: 0.0 hr

LESSON STEPS

- ☐ 1. Ground brief: 50 hours of PIC cross-country time for the instrument rating and the commercial certificate - Ground 61.65(d)(1) 61.129(a)(2)(ii)
 - ☐ a. Cross-country definition: a landing more than 50 nm straight-line from the original departure point 61.1
 - ☐ b. PIC time as the sole manipulator of the controls, and as the sole occupant 61.51(e)(1)
 - ☐ c. Logbook entries: date, flight time, departure and arrival points, and type of experience 61.51(b)
 - ☐ d. Open the cross-country ledger. Enter the PIC cross-country time already in the logbook.
- ☐ 2. Cross-country flight planning: route, nav log, weight and balance, performance, and fuel - Do CA.I.D CA.I.F
- ☐ 3. Weather briefing and go/no-go decision - Do CA.I.C CA.I.H
- ☐ 4. Airspace, NOTAM, and TFR review for the route - Do CA.I.E
- ☐ 5. Chart Supplement review for the destination: runway, traffic pattern, fuel, and attendance - Do CA.I.D
- ☐ 6. Preflight assessment - Do CA.II.A
- ☐ 7. Departure and flight following - Do CA.III.A CA.VI.B
- ☐ 8. Pilotage and dead reckoning with checkpoint times - Do CA.VI.A
- ☐ 9. Simulated systems malfunction en route - Directed performance CA.IX.C
- ☐ 10. Arrival and traffic pattern at the destination (suggested: L52, non-towered) - Do CA.III.B
- ☐ 11. Short-field approach and landing at the destination (L52 runway: 2,325 ft) - Practice CA.IV.F
- ☐ 12. Short-field takeoff and maximum performance climb - Practice CA.IV.E
- ☐ 13. Diversion to an alternate on the return leg - Directed performance CA.VI.C
- ☐ 14. Return, approach, and landing at KSNS - Do CA.IV.B
- ☐ 15. After landing, parking, and securing - Do CA.XI.A
- ☐ 16. Logbook entry: 2.0 hr or more, every landing point, PIC and dual received. Remarks: commercial day cross-country, with the straight-line distance to the destination. Update the ledger. - Do 61.129(a)(3)(iii) 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Completed nav log
- Sectional chart
- Chart Supplement entry for the destination
- Weight and balance and performance worksheet
- Weather briefing printout
- Cross-country ledger
- Pilot logbook

COMPLETION STANDARDS

- Total flight time is 2.0 hours or more. The flight lands more than 100 nm straight-line from KSNS.
- Navigation meets Commercial ACS CA.VI.A. Position stays within 2 nm of the planned route. Checkpoints are within 3 minutes of the ETA. Altitude stays within 100 ft and heading within 10 degrees.
- The instructor grades the short-field work against CA.IV.E and CA.IV.F and records any gap.
- The logbook entry and the ledger are complete and agree.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Solo Cross-Country: Central Coast

XC 2

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
SUGGESTED ROUTE (OPTIONAL)		FARTHEST LANDING	ROUTE DISTANCE	
KSNS → KLPC → KIZA → KSBP → KSNS		144.1 nm	296.1 nm	

Route criteria: Any route with a landing more than 50 nm straight-line from KSNS.

Counts toward: PIC cross-country time toward the 50 hours.

OBJECTIVE

Fly the first solo cross-country of these lessons. The suggested route crosses the Central Coast to two non-towered airports and one towered airport. The student makes every decision alone. Farthest landing on the suggested route: Santa Ynez (KIZA), 144.1 nm from KSNS.

Ground: 0.5 hr | Dual: 0.0 hr | Solo: 4.0 hr

LESSON STEPS

- ☐ 1. Route review with the instructor: plan, weather, personal minimums, and go/no-go - Ground CA.I.D CA.I.H
- ☐ 2. Weather briefing with marine layer timing at each coastal airport - Do CA.I.C
- ☐ 3. Special use airspace, NOTAM, and TFR check for the route. The suggested route passes Vandenberg Space Force Base. - Do CA.I.E
- ☐ 4. File and activate a VFR flight plan. Request flight following. - Do CA.VI.B
- ☐ 5. Pilotage and dead reckoning with an ETA update at each checkpoint - Do CA.VI.A
- ☐ 6. Non-towered arrival and landing (suggested: Lompoc, KLPC) - Do CA.III.B CA.IV.B
- ☐ 7. Short-field landing (suggested: Santa Ynez, KIZA, runway 2,803 ft) - Do CA.IV.F
- ☐ 8. Towered arrival and landing (suggested: San Luis Obispo, KSBP) - Do CA.III.A
- ☐ 9. Fuel check at each stop: actual fuel used against the plan - Do CA.I.D
- ☐ 10. Return to KSNS, then after landing, parking, and securing - Do CA.XI.A
- ☐ 11. Close the flight plan. Log the flight. Update the ledger. - Do 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Multi-leg nav log
- Sectional chart
- Chart Supplement entries for every stop
- Weight and balance and performance worksheet
- Weather briefing printout
- Cross-country ledger

COMPLETION STANDARDS

- The student flies the route as planned, or makes a sound diversion and records why.
- Navigation meets the CA.VI.A tolerances in XC 1.
- Fuel used stays within the plan, with the planned reserve intact at each landing.
- The logbook entry and the ledger are complete and agree.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Solo Cross-Country: Central Valley and Class C

XC 3

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
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SUGGESTED ROUTE (OPTIONAL)	FARTHEST LANDING	ROUTE DISTANCE
KSNS → KBFL → KVIS → KFAT → KSNS	144.2 nm	322.7 nm

Route criteria: Any route with a landing more than 50 nm straight-line from KSNS.

Counts toward: PIC cross-country time toward the 50 hours.

OBJECTIVE

Fly to the Central Valley and back. The suggested route includes a towered airport, a non-towered airport, and the Class C airspace at Fresno. The student plans terrain clearance over the coastal mountains and density altitude for a hot valley day. Farthest landing on the suggested route: Meadows Field (KBFL), 144.2 nm from KSNS.

Ground: 0.5 hr | Dual: 0.0 hr | Solo: 4.0 hr

LESSON STEPS

- ☐ 1. Route review with the instructor: plan, weather, personal minimums, and go/no-go - Ground CA.I.D CA.I.H
- ☐ 2. Terrain and obstacle clearance for each mountain crossing - Do CA.VI.A
- ☐ 3. Density altitude and performance for each airport on the route - Do CA.I.F
- ☐ 4. Class C requirements and frequencies for the route (suggested: Fresno) - Do CA.I.E
- ☐ 5. File and activate a VFR flight plan. Request flight following. - Do CA.VI.B
- ☐ 6. Towered arrival and landing (suggested: Meadows Field, KBFL) - Do CA.III.A CA.IV.B
- ☐ 7. Non-towered arrival and landing (suggested: Visalia, KVIS) - Do CA.III.B
- ☐ 8. Two-way radio contact before entering Class C airspace, then landing (suggested: Fresno, KFAT) - Do CA.I.E CA.III.A
- ☐ 9. Position check: confirm position with two independent sources on each leg - Do CA.VI.D
- ☐ 10. Return to KSNS, then after landing, parking, and securing - Do CA.XI.A
- ☐ 11. Close the flight plan. Log the flight. Update the ledger. - Do 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Multi-leg nav log
- Sectional chart
- Chart Supplement entries for every stop
- Density altitude and performance worksheet
- Weather briefing printout
- Cross-country ledger

COMPLETION STANDARDS

- The student flies the route as planned, or makes a sound diversion and records why.
- The student establishes two-way radio communication before entering Class C airspace.
- Navigation meets the CA.VI.A tolerances in XC 1.
- The logbook entry and the ledger are complete and agree.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Commercial Night Cross-Country (Dual)

XC 4

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
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SUGGESTED ROUTE (OPTIONAL)	FARTHEST LANDING	ROUTE DISTANCE
KSNS → KSAC → KSNS	111.0 nm	222.1 nm

Route criteria: Night. 2.0 hr or more. A landing more than 100 nm straight-line from KSNS.

Counts toward: 61.129(a)(3)(iv): commercial night cross-country. PIC cross-country time toward the 50 hours.

OBJECTIVE

Plan and fly the commercial night cross-country with an instructor. The whole flight is at night, lasts at least 2.0 hours, and lands more than 100 nm straight-line from KSNS. The suggested destination is Sacramento Executive (KSAC), 111.0 nm from KSNS. This flight meets 14 CFR 61.129(a)(3)(iv). It logs as PIC cross-country time.

Ground: 2.0 hr | Dual: 3.0 hr | Solo: 0.0 hr

LESSON STEPS

- ☐ 1. Night begins at the end of evening civil twilight. Compute it for the date of the flight. - Ground 14 CFR 1.1
- ☐ 2. Night route planning: terrain, lighted landmarks, alternates, and fuel - Do CA.I.D
- ☐ 3. Weather briefing with night hazards: fog, low clouds, and temperature and dew point spread - Do CA.I.C
- ☐ 4. Night preflight with a lighting check - Do CA.II.A
- ☐ 5. Night departure and flight following - Do CA.III.A CA.VI.B
- ☐ 6. Night pilotage with lighted landmarks - Do CA.VI.A
- ☐ 7. Simulated electrical failure at night: lighting and radios - Directed performance CA.IX.C
- ☐ 8. Simulated lost procedure at night - Directed performance CA.VI.D
- ☐ 9. Arrival and night landing at the destination (suggested: KSAC, towered) - Do CA.III.A CA.IV.B
- ☐ 10. Return leg and night landing at KSNS - Do CA.IV.B
- ☐ 11. After landing, parking, and securing - Do CA.XI.A
- ☐ 12. Logbook entry: 2.0 hr or more of night time, every landing point, PIC and dual received. Remarks: commercial night cross-country, with the straight-line distance to the destination. Update the ledger. - Do 61.129(a)(3)(iv) 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Completed night nav log
- Sectional chart
- Chart Supplement entry for the destination
- Flashlight with red lens and spare batteries
- Weather briefing printout
- Civil twilight time for the date
- Cross-country ledger

COMPLETION STANDARDS

- All logged flight time is after the end of evening civil twilight, and the total is 2.0 hours or more.
- Navigation meets the CA.VI.A tolerances in XC 1.
- The student keeps control and position through the simulated failures.
- The logbook entry and the ledger are complete and agree.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Solo Night Cross-Country: Tower Pattern Work 1

XC 5

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
SUGGESTED ROUTE (OPTIONAL)		FARTHEST LANDING	ROUTE DISTANCE	
KSNS → KSAC → KSNS		111.0 nm	222.1 nm	

Route criteria: Night. Any airport with an operating control tower. Land more than 50 nm from KSNS for cross-country credit.

Counts toward: 61.129(a)(4)(ii), part 1: solo night time and 5 towered takeoffs and landings. PIC cross-country time toward the 50 hours.

Any airport with an operating control tower works. The KSAC tower closes at 2100 local, so fly there from October to early March.

OBJECTIVE

Fly the first solo night cross-country. Make 5 takeoffs and 5 landings at any airport with an operating control tower. Each landing follows a full traffic pattern. The suggested airport is Sacramento Executive (KSAC), on the XC 4 route. With XC 6, this lesson meets 14 CFR 61.129(a)(4)(ii).

Ground: 1.0 hr | Dual: 0.0 hr | Solo: 3.0 hr

LESSON STEPS

- ☐ 1. Night solo brief with the instructor: personal minimums, terrain, fuel, and go/no-go - Ground CA.I.H
- ☐ 2. Confirm the tower hours in the current Chart Supplement and NOTAMs - Do CA.I.E
- ☐ 3. Compute the end of evening civil twilight. Take off after it. - Do 14 CFR 1.1
- ☐ 4. Night preflight with a lighting check - Do CA.II.A
- ☐ 5. Night departure and flight following - Do CA.VI.B
- ☐ 6. Night navigation to the pattern airport (suggested: the XC 4 route to KSAC) - Do CA.VI.A
- ☐ 7. 5 takeoffs and 5 landings at the pattern airport with the tower operating. Each landing follows a full traffic pattern. - Do CA.III.A CA.III.B 61.129(a)(4)(ii)
- ☐ 8. Return and night landing at KSNS - Do CA.IV.B
- ☐ 9. After landing, parking, and securing - Do CA.XI.A
- ☐ 10. Logbook entry: solo, night time, and the takeoffs and landings with the tower operating. Update the ledger. - Do 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Completed night nav log
- Sectional chart
- Chart Supplement entry for the pattern airport
- Flashlight with red lens and spare batteries
- Civil twilight time for the date
- Cross-country ledger

COMPLETION STANDARDS

- All flight time logged as night is after the end of evening civil twilight.
- 5 takeoffs and 5 landings, each with a traffic pattern, at an airport while its tower operates.
- The ledger shows running totals for solo night hours and towered night takeoffs and landings.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Solo Night Cross-Country: Tower Pattern Work 2

XC 6

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
SUGGESTED ROUTE (OPTIONAL)		FARTHEST LANDING	ROUTE DISTANCE	
KSNS → KSMX → KSNS		119.6 nm	239.1 nm	

Route criteria: Night. Any airport with an operating control tower. Land more than 50 nm from KSNS for cross-country credit.

Counts toward: 61.129(a)(4)(ii), part 2: completes 5.0 solo night hours and 10 towered takeoffs and landings. PIC cross-country time toward the 50 hours.

Any airport with an operating control tower works. The KSMX tower closes at 2000 local, so fly there from November to mid-February.

OBJECTIVE

Fly a second solo night cross-country. Make 5 takeoffs and 5 landings at any airport with an operating control tower. The suggested airport is Santa Maria (KSMX), 119.6 nm from KSNS. After this flight the ledger shows at least 5.0 solo night hours and 10 towered takeoffs and landings. That meets 14 CFR 61.129(a)(4)(ii).

Ground: 0.5 hr | Dual: 0.0 hr | Solo: 3.5 hr

LESSON STEPS

- ☐ 1. Night solo brief with the instructor: terrain on the route, fuel, and go/no-go - Ground CA.I.H
- ☐ 2. Confirm the tower hours in the current Chart Supplement and NOTAMs - Do CA.I.E
- ☐ 3. Compute the end of evening civil twilight. Take off after it. - Do 14 CFR 1.1
- ☐ 4. Night preflight with a lighting check - Do CA.II.A
- ☐ 5. Night departure and flight following - Do CA.VI.B
- ☐ 6. Night navigation with terrain awareness (suggested route: along the Salinas Valley) - Do CA.VI.A
- ☐ 7. 5 takeoffs and 5 landings at the pattern airport with the tower operating. Each landing follows a full traffic pattern. - Do CA.III.A CA.III.B 61.129(a)(4)(ii)
- ☐ 8. Return and night landing at KSNS - Do CA.IV.B
- ☐ 9. After landing, parking, and securing - Do CA.XI.A
- ☐ 10. Logbook entry and ledger update. Confirm the solo night total is 5.0 hr or more and the towered count is 10 or more. - Do 61.129(a)(4)(ii) 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Completed night nav log
- Sectional chart
- Chart Supplement entry for the pattern airport
- Flashlight with red lens and spare batteries
- Civil twilight time for the date
- Cross-country ledger

COMPLETION STANDARDS

- All flight time logged as night is after the end of evening civil twilight.
- 5 takeoffs and 5 landings, each with a traffic pattern, at an airport while its tower operates.
- Ledger totals after this lesson: solo night 5.0 hr or more, and towered night takeoffs and landings 10 or more.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Solo Cross-Country: North Bay and Class B

XC 7

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
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SUGGESTED ROUTE (OPTIONAL)	FARTHEST LANDING	ROUTE DISTANCE
KSNS → KUKI → KSTS → KAPC → KSNS	165.9 nm	336.2 nm

Route criteria: Any route with a landing more than 50 nm straight-line from KSNS.

Counts toward: PIC cross-country time toward the 50 hours.

OBJECTIVE

The suggested route is the longest solo route so far. It goes north past San Francisco. Plan around the Class B, or through it with a clearance. Land at one non-towered airport and two towered airports. Farthest landing on the suggested route: Ukiah (KUKI), 165.9 nm from KSNS.

Ground: 0.5 hr | Dual: 0.0 hr | Solo: 4.5 hr

LESSON STEPS

- ☐ 1. Route review with the instructor: plan, weather, personal minimums, and go/no-go - Ground CA.I.D CA.I.H
- ☐ 2. Class B plan: route around the Class B, or plan for a clearance to enter. The suggested route passes the San Francisco Class B. - Do CA.I.E
- ☐ 3. Weather briefing with fog and marine layer timing for the route - Do CA.I.C
- ☐ 4. Brief one alternate airport for each leg before departure - Do CA.VI.C
- ☐ 5. File and activate a VFR flight plan. Request flight following. - Do CA.VI.B
- ☐ 6. Non-towered arrival and landing (suggested: Ukiah, KUKI) - Do CA.III.B CA.IV.B
- ☐ 7. Towered arrival and landing (suggested: Santa Rosa, KSTS) - Do CA.III.A
- ☐ 8. Towered arrival and landing (suggested: Napa, KAPC) - Do CA.III.A
- ☐ 9. Return to KSNS, then after landing, parking, and securing - Do CA.XI.A
- ☐ 10. Close the flight plan. Log the flight. Update the ledger. - Do 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Multi-leg nav log
- Sectional chart and the TAC for any Class B on the route
- Chart Supplement entries for every stop
- Weight and balance and performance worksheet
- Weather briefing printout
- Cross-country ledger

COMPLETION STANDARDS

- The student flies the route as planned, or makes a sound diversion and records why.
- The student does not enter Class B airspace without a clearance.
- Navigation meets the CA.VI.A tolerances in XC 1.
- The logbook entry and the ledger are complete and agree.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

INSTRUCTOR SIGNATURE / INITIALS

DATE

Commercial Long Solo Cross-Country

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
SUGGESTED ROUTE (OPTIONAL)		FARTHEST LANDING	ROUTE DISTANCE	
KSNS → KSMX → KCNO → KSNS		252.8 nm	523.0 nm	

Route criteria: 300 nm or more in total. Three landing points. One landing at least 250 nm straight-line from the departure airport.

Counts toward: 61.129(a)(4)(i): commercial long cross-country. PIC cross-country time toward the 50 hours.

OBJECTIVE

Fly the commercial long cross-country solo. The flight covers at least 300 nm in total and lands at three points or more. One landing is at least 250 nm straight-line from the original departure point (14 CFR 61.129(a)(4)(i)). The suggested far airport is Chino (KCNO), 252.8 nm from KSNS. The margin is under 3 nm, so start at KSNS.

Ground: 1.5 hr | Dual: 0.0 hr | Solo: 6.0 hr

LESSON STEPS

- ☐ 1. Long cross-country brief with the instructor: route, fuel, fatigue, and go/no-go - Ground CA.I.D CA.I.H
- ☐ 2. Confirm the route meets the route criteria. Measure the far airport distance in your EFB. Record it in the student file. - Do 61.129(a)(4)(i)
- ☐ 3. Airspace plan: Class B and Class C near the far airport, frequencies, and VFR routes - Do CA.I.E
- ☐ 4. Fuel plan for each leg. Decide on a fuel stop for the return. - Do CA.I.D
- ☐ 5. Weather briefing for the whole route - Do CA.I.C
- ☐ 6. File and activate a VFR flight plan. Use flight following for the whole route. - Do CA.VI.B
- ☐ 7. Arrival and landing at the first stop (suggested: Santa Maria, KSMX) - Do CA.III.A
- ☐ 8. Arrival and landing at the far airport (suggested: Chino, KCNO) - Do CA.III.A CA.III.B
- ☐ 9. Fatigue check and go/no-go decision at the far airport before the return - Do CA.I.H
- ☐ 10. Return to KSNS on the planned route, then after landing, parking, and securing - Do CA.VI.A CA.XI.A
- ☐ 11. Logbook entry: solo, every landing point, and the total distance. Remarks: commercial long cross-country, with the far airport distance. Update the ledger. - Do 61.129(a)(4)(i) 61.51(b)

ITEMS NEEDED FOR SUCCESS

- Multi-leg nav log
- Sectional charts and TACs for the route
- Chart Supplement entries for every stop
- Weight and balance and performance worksheet
- Weather briefing printout
- Food and water
- Cross-country ledger

COMPLETION STANDARDS

- The flight meets the route criteria: 300 nm or more, three landing points, and the 250 nm landing.
- The student changes the plan when weather, fuel, or fatigue requires it. A diversion is a good decision. If the flight does not reach the far airport, the lesson repeats.
- The logbook entry and the ledger are complete and agree.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

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Solo Cross-Country: Unknown Destination

XC 9

STUDENT	DATE	INSTRUCTOR	FLIGHT TIME	GROUND TIME
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ROUTE	FARTHEST LANDING FROM KSNS	ROUTE DISTANCE
Assigned at the briefing	More than 50 nm	Set by the route

Route criteria: A destination more than 50 nm straight-line from KSNS.

Counts toward: PIC cross-country time toward the 50 hours. Ledger check.

OBJECTIVE

The instructor assigns a destination at the briefing. The student plans the flight in 60 minutes and flies it solo. The destination is more than 50 nm straight-line from KSNS. A destination 100 to 130 nm away keeps the flight near the planned 3.0 hours. The lesson ends with a ledger check.

Ground: 1.0 hr | Dual: 0.0 hr | Solo: 3.0 hr

LESSON STEPS

- ☐ 1. Instructor assigns the destination at the briefing - Ground
- ☐ 2. Plan the whole flight in 60 minutes: route, nav log, weather, airspace, weight and balance, and fuel - Do CA.I.D CA.I.C CA.I.E
- ☐ 3. Instructor review of the plan and go/no-go - Ground CA.I.H
- ☐ 4. Fly the route with flight following - Do CA.VI.A CA.VI.B
- ☐ 5. Arrival and landing at the assigned destination - Do CA.IV.B
- ☐ 6. Return to KSNS, then after landing, parking, and securing - Do CA.XI.A
- ☐ 7. Log the flight. Update the ledger. - Do 61.51(b)
- ☐ 8. Ledger check with the instructor - Ground 61.65(d)(1) 61.129(a)(2)(ii)
 - ☐ a. Logged PIC cross-country time is 44.0 hr or more. IR Lessons 20 and 22 add 6.0 planned hours for 50.0.
 - ☐ b. If IR Lesson 20 does not land more than 50 nm from KSNS, the target is 46.4 hr.
 - ☐ c. If the ledger is short, add solo cross-country flights to any airport more than 50 nm from KSNS.
 - ☐ d. Commercial items complete: XC 1, XC 4, XC 5 and XC 6, and XC 8.
61.129(a)(3)(iii) 61.129(a)(3)(iv) 61.129(a)(4)(i) 61.129(a)(4)(ii)

ITEMS NEEDED FOR SUCCESS

- Sectional chart
- Chart Supplement
- Blank nav log
- Weight and balance and performance worksheet
- Cross-country ledger
- Pilot logbook

COMPLETION STANDARDS

- The plan is complete within 60 minutes and passes the instructor review.
- The destination landing is more than 50 nm straight-line from KSNS.
- The ledger meets the target in step 8, or the added flights are on the schedule.

DEBRIEF: WHAT WENT WELL, WHAT TO WORK ON NEXT

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Regulation text

Verbatim from the eCFR, Title 14, current as of October 5, 2026. Check the current text at [ecfr.gov](https://www.ecfr.gov) before you rely on it.

14 CFR § 61.1, Applicability and definitions: Paragraph (b), cross-country time, (ii)

- (ii) For the purpose of meeting the aeronautical experience requirements (except for a rotorcraft category rating), for a private pilot certificate (except for a powered parachute category rating), a commercial pilot certificate, or an instrument rating, or for the purpose of exercising recreational pilot privileges (except in a rotorcraft) under § 61.101 (c), time acquired during a flight
 - (A) Conducted in an appropriate aircraft;
 - (B) That includes a point of landing that was at least a straight-line distance of more than 50 nautical miles from the original point of departure; and
 - (C) That involves the use of dead reckoning, pilotage, electronic navigation aids, radio aids, or other navigation systems to navigate to the landing point.

This is the definition every cross-country hour in the phase must meet.

14 CFR § 61.51, Pilot logbooks: Paragraph (e)(1), logging pilot-in-command flight time

- (1) A sport, recreational, private, commercial, or airline transport pilot may log pilot in command flight time for flights
 - (i) Except when logging flight time under § 61.159(c), when the pilot is the sole manipulator of the controls of an aircraft for which the pilot is rated, or has sport pilot privileges for that category and class of aircraft, if the aircraft class rating is appropriate;
 - (ii) When the pilot is the sole occupant in the aircraft;

Dual lessons log as PIC under (i). Solo lessons log as PIC under (ii).

14 CFR § 61.51, Pilot logbooks: Paragraph (b), logbook entries

- (i) Date.
- (ii) Total flight time or lesson time.
- (iii) Location where the aircraft departed and arrived, or for lessons in a full flight simulator or flight training device, the location where the lesson occurred.
- (iv) Type and identification of aircraft, full flight simulator, flight training device, or aviation training device, as appropriate.

Record every landing point. The departure and arrival points prove the cross-country distance.

14 CFR § 61.65, Instrument rating requirements: Paragraph (d)(1), aeronautical experience, instrument-airplane

- (1) Except as provided in paragraph (g) of this section, 50 hours of cross-country time as pilot in command, of which 10 hours must have been in an airplane; and

The phase brings the logbook to this total before the IR checkride.

14 CFR § 61.129, Aeronautical experience (commercial pilot): Paragraph (a)(2), pilot-in-command time

- (2) 100 hours of pilot-in-command flight time, which includes at least
 - (i) 50 hours in airplanes; and
 - (ii) 50 hours in cross-country flight of which at least 10 hours must be in airplanes.

The same 50 PIC cross-country hours also meet 61.65(d)(1).

14 CFR § 61.129, Aeronautical experience (commercial pilot): Paragraph (a)(3)(iii), day cross-country

(iii) One 2-hour cross country flight in a single engine airplane in daytime conditions that consists of a total straight-line distance of more than 100 nautical miles from the original point of departure;

This is training with an instructor, part of the 20 hours in (a)(3).

14 CFR § 61.129, Aeronautical experience (commercial pilot): Paragraph (a)(3)(iv), night cross-country

(iv) One 2-hour cross country flight in a single engine airplane in nighttime conditions that consists of a total straight-line distance of more than 100 nautical miles from the original point of departure; and

This is training with an instructor, part of the 20 hours in (a)(3).

14 CFR § 61.129, Aeronautical experience (commercial pilot): Paragraph (a)(4)(i), long cross-country

(4) Ten hours of solo flight time in a single engine airplane or 10 hours of flight time performing the duties of pilot in command in a single engine airplane with an authorized instructor on board (either of which may be credited towards the flight time requirement under paragraph (a)(2) of this section), on the areas of operation listed under § 61.127(b)(1) that include

(i) One cross-country flight of not less than 300 nautical miles total distance, with landings at a minimum of three points, one of which is a straight-line distance of at least 250 nautical miles from the original departure point. However, if this requirement is being met in Hawaii, the longest segment need only have a straight-line distance of at least 150 nautical miles; and

The distance is measured from the original departure point. Start at KSNS.

14 CFR § 61.129, Aeronautical experience (commercial pilot): Paragraph (a)(4)(ii), night VFR at a towered airport

(ii) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

The tower must be operating. Check the tower hours before each flight.

14 CFR § 1.1, General definitions: Definition of night

Night means the time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the Air Almanac, converted to local time.

Log as night only the time after the end of evening civil twilight.