

## SECTIONAL WORKSHEET (Part 2 of 2)

*This worksheet uses the San Antonio sectional, unless otherwise noted with a figure or other instructions. Many questions are designed to be thought provoking and aid in further discussion between the student and instructor. Part 1 is general in nature; Part 2 continues general information and focuses on using the sectional for flight planning purposes. Allow 1-2 hours to complete the worksheet for each part. You may use a FAR/AIM for this open book worksheet. A chart plotter is also required for Part 2.*

### Flight #1 (second leg of a cross country - the aircraft based out of Kerrville)

1. You are planning a VFR leg from Garner (UVA) to Kimble Co (JCT).
  - a. Draw a direct line on both the North and South side of the sectional. (Hint, instructions for doing this are contained on the sectional)
  - b. Using your chart plotter what is the true bearing from UVA to JCT? What is the magnetic bearing?
  - c. What is the distance in nm?
  - d. What would you select as a cruise altitude?
2. Based on the above direct course, select waypoints along your route? What one consistent topographical feature along the entire route might be a very visible reference or aid in navigating this route?
3. What might be some safety considerations in flying this course?
4. How would you open your flight plan after takeoff?
5. How would you request flight following?
6. The above is a form of navigation techniques known as \_\_\_\_\_ and \_\_\_\_\_.
7. One of your waypoints is the town of Leakey. What might have been a better visual waypoint?
8. One of your visual waypoints along the route of flight is the private airstrip Prade. Your instructor wants you to back up this visual waypoint with two intersecting VOR radials. You select Rocksprings and Center Point VORs and draw outbound radials from these VORs to intersect over Prade. Your instructor says while the concept is correct, there may be an issue with your selection of VORs for what reason? What might be a better selection of VORs? Explain?
9. What is your plan for closing your VFR flight plan upon landing?
10. As you pass over Real County (49R), one of your passengers complains of nausea and feeling ill and is clammy when you touch their forehead. After a brief discussion with the ill passenger, you elect to divert to \_\_\_\_ airport and land to get medical attention. Why did you select that airport? (*Note, there is no correct answer, but try not to read into this scenario that a safety of life condition exists or is likely suspected – but it cannot be ruled out. Use the information on the sectional to aid you in your decision.*)

Flight #2 (leg of a cross country)

1. This route is from KJCT V68 CSI KERV (note: when needing to be precise about an airport, be sure to precede it with a K if it is a 3 alpha designator)
  - a. Is this leg long enough to qualify as a cross country flight?
  - b. How would you open your VFR flight plan?
  - c. What advantage/disadvantage does this have over flying V198?
  - d. What cruise altitude would you chose?
2. Your instructor asks you to define two VOR waypoints along V68. Describe these, and provide rationale for how you selected them.
3. About 10nm on this route your VOR navigation system fails. How could you continue this trip?
4. As you approach the CSI VOR you see the Kerrville airport to the left. At this point you elect to continue to the CSI VOR, detect the VOR station passage, and initiate a left turn to fly the outbound 056 degree radial to KERV. Is this the best and/or safest approach? Discuss.
5. After you land at KERV name two means to close your flight plan.
6. As you approach the CSI VOR you tune in the AWOS for KERV and hear nothing. What might this be an indication of?
7. What is your best source of traffic advisories at KERV?

Flight #3 (KACT ACT KGOP AGJ KLZZ)

1. You entered the above flight plan in your Garmin G1000. The data base in your aircraft is not up to date. After takeoff you activate the flight plan, set the plane on auto pilot and let 'George' (the autopilot) do all the navigation until you get to within 5 miles of AGJ. What violations can you expect from this?
2. Can you legally use your GPS and autopilot for this flight? If so what precautions must you take?

Flight #4 (KLZZ KGRK KILE TPL KACT)

1. On a flight from Lampasas to Waco you have entered the above flight plan data into your GPS. Your instructor indicates there may be a possible airspace issue with this flight plan. What is it and can you continue this flight on this route?
2. You have decided to alter this flight plan by introducing a user defined waypoint (N32 deg 2.89' W97 deg 31.55') between KILE and KTPL. How much additional distance to this flight plan does this take?
3. Is it legal to use user defined waypoints in this manner?
4. You plan to cruise at 3,500' MSL. Do you need to establish radio communications with KGRK?
5. What type of airspace exists at 700' AGL at KGRK?
6. What type of airspace exists at KILE at the surface?
7. What kind of airspace exists at the surface at the TPL VOR?

## Flight #5 (student solo cross-country)

1. In the plan below, you plan to land at Yoakum and Giddings Lee. Will this plan meet the requirements for the long cross country as specified in FAR 61.109?
2. Conduct a flight plan log, including weather and winds aloft. Complete this in less than 30 minutes.
3. Be prepared to discuss and airspace, including SUA, that may be an issue for this flight.
4. You will open/close a VFR flight plan at each point of departure/landing. Describe method to open and close.
5. Discuss how you will obtain flight following for each leg.
6. Discuss waypoints along each leg (each waypoint shall be about 15 nm from each other).
7. Your aircraft is only VOR equipped with 1 VOR channel. Describe how you will back up a visual waypoint with a VOR waypoint.

