

1. **C,D** – 61.56, 61.31(f)
2. **A** – 91.207, 91.215
3. **C** – KAVL A/FD
4. **B** – Weight and balance information
5. **D** – AC-0045G
6. **C** – 91.155
7. **C** – KAVL A/FD
8. **B** – KAVL A/FD and AIM 1-1-8
9. **A** – Leg profile information
10. **D** – Leg profile information
11. **A** – Sectional chart and FAA Sectional Symbolology document
12. **B, C** – KMOR A/FD
13. **B** – 91.157(d)
14. **D** – Landing distance calculation
15. **B** – Leg profile and no night time is logged. FAR 1.1
16. **D** – Weight and balance information. Reference scenario: +51 gallons of fuel
17. **B** – Leg profile
18. **C** – Leg profile and sectional chart.
19. **B**
20. **A** – Leg profile
21. **A** – Leg profile and 91.151
22. **A** – 91.153
23. **D** – Weight and balance
24. **B** – Takeoff and landing distance calculation
25. **B** – Leg profile
26. **A** – 91.211
27. **B** – Time, speed, distance calculation
28. **D** – It is the “O” in the word *MOUNTAINS*
29. **A** – Weight and balance calculation
30. **C** – Reference calculation
31. **B** – AC-0045G
32. **C** – KGKT A/FD
33. **C** – KGKT METAR and AC-0045G
34. **C** – Landing distance calculation
35. **A** – 43.c.3
36. **B** – Leg profile calculations. 8:55 (24.5 nm) on leg 2 + 30 min ground time + 10:37 on leg 3
37. **B, C, D** – AIM 4-1-13h
38. **C** – See question 1, Exceeded maximum landing weight on leg 3. Not “iv” because 91.119 – Clingmans Dome is an *Other than congested area*.
39. **A** – Leg profiles
40. **C** – Leg profiles

LEG #: 1
FROM: KAVL
TO: KMOR

CLIMB

WIND: CALM
TC: 318
TH: 318
VAR: 6 W
MH: 324

T: 6:00
F: 3.0 g
D: 15 nm
TAS: 125 kts
GS: 125 kts

CRUISE

ALT: 8,500' 8 C
WIND: 187/31
TAS: 160 kts

TC: 318 T: 8:07
TH: 310 F: 4.0 g (29.5 gph)
VAR: 6 W D: 24.2 nm
MH: 316 GS: 179 kts
A/P: 2165' A/P: 1313'

DESCENT

WIND: 180/09
TC: 318
TH: 316
VAR: 6 W
MH: 322

T: 7:16
F: 1.7 g (14.0 gph)
D: 20.8 nm
TAS: 165 kts
GS: 172 kts

Depart: 0600L (1000Z)
Arrive: 0621L (1021Z)

TOTALS

Time: 21:23
Fuel: 8.7 g
Distance: 60 nm

Landing Distance: **960'**
Runway 23
Wind 180/9
26 C
3643.3 lbs

TRIP TOTALS

Time: 21:23
Fuel: 8.7 g
Distance: 60 nm

Weight at top of climb:
T/O Weight: 3949.3 lbs
Climb Fuel: 33.0 lbs
3916.3 lbs

LEG #: 2
FROM: KMOR
TO: KTOC

CLIMB

WIND: CALM
TC: 178
TH: 178
VAR: 6 W
MH: 184

T: 11:00
F: 5.5 g
D: 28 nm
TAS: 125 kts
GS: 125 kts

CRUISE

ALT: 12,500' 4 C
WIND: 173/36
TAS: 165 kts

TC: 178
TH: 177
VAR: 6 W
MH: 183

T: 16:17
F: 6.9 g (25.5 gph)
D: 35 nm
GS: 129 kts

A/P: 1313' A/P: 996'

DESCENT

WIND: CALM
TC: 178
TH: 178
VAR: 6 W
MH: 184

T: 11:38
F: 2.7 g
D: 32 nm
TAS: 165 kts
GS: 165 kts

Depart: 0636L (1036Z)
Arrive: 0715L (1115Z)

TOTALS

Time: 38:55
Fuel: 15.1 g
Distance: 95 nm

TRIP TOTALS

Time: 1:00:18
Fuel: 23.8 g
Distance: 135 nm

LEG #: 3
FROM: KTOC
TO: KGKT

CLIMB

WIND: CALM
TC: 352
TH: 352
VAR: 6 W
MH: 358

T: 9:00
F: 5.9 g
D: 20 nm
TAS: 125 kts
GS: 125 kts

CRUISE

ALT: 10,500' 8 C
WIND: 195/28
TAS: 160 kts

TC: 352 T: 9:24
TH: 348 F: 4.3 g (27.5 gph)
VAR: 6 W D: 28 nm
MH: 354 GS: 185 kts
A/P: 996' A/P: 1014'

DESCENT

WIND: 170/07
TC: 352
TH: 352
VAR: 6 W
MH: 358

T: 9:36
F: 2.2 g
D: 27.5 nm
TAS: 165 kts
GS: 172 kts

Depart: 0745L (1145Z)
Arrive: 0813L (1213Z)

TOTALS

Time: 28:00
Fuel: 11.5 g
Distance: 76.5 nm

T/O Distance: **3095'**
Calm wind
27 C
4245.7 lbs

TRIP TOTALS

Time: 1:28:00
Fuel: 35.3 g
Distance: 211.5 nm

Landing Distance over 50':
170/07 2045'
23 C
RWY 10
4176.7 lbs

WEIGHT & BALANCE

LEG 1			
	Weight	Arm	Moment
BEW	3156.50		427169.00
P&FP	290.00	135.50	39295.00
Bag Aft	93.00	248.23	23085.39
ZFW	3539.50	138.31	489549.39
Fuel (29g)	174.00	150.31	26153.94
Ramp Wt	3713.50	138.87	515703.33
S/T/R	-18.00	150.31	-2705.58
T/O Wt	3695.50	138.82	512997.75
Burn (8.7)	-52.20	150.31	-7846.18
Lnd Wt	3643.30	138.65	505151.57

LEG 3			
BEW	3156.50		427169.00
P&FP	290.00	135.50	39295.00
Pax (Rear)	304.00	218.75	66500.00
Bag Fwd	83.00	88.60	7353.80
Bag Aft	93.00	248.23	23085.39
ZFW	3926.50	143.49	563403.19
Fuel (56.2)	337.20	150.31	50684.53
Ramp Wt	4263.70	144.03	614087.72
S/T/R	-18.00	150.31	-2705.58
T/O Wt	4245.70	144.00	611382.14
Burn (11.5)	-69.00	150.31	-10371.39
Lnd Wt	4176.70	143.90	601010.75
MAX LANDING WEIGHT EXCEEDED!!			

LEG 2			
	Weight	Arm	Moment
BEW	3156.50		427169.00
P&FP	290.00	135.50	39295.00
Bag Aft	93.00	248.23	23085.39
ZFW	3539.50	138.31	489549.39
Fuel (71.3)	427.80	150.31	64302.62
Ramp Wt	3967.30	139.60	553852.01
S/T/R	-18.00	150.31	-2705.58
T/O Wt	3949.30	139.56	551146.43
Burn (15.1)	-90.60	150.31	-13618.09
Lnd Wt	3858.70	139.30	537528.34

#29			
T/O Wt	4245.70	144.00	611382.14
Burn	-55.80	150.31	-8387.30
Tot Wt	4189.90	143.92	602994.84
GWT	4189.9		
Wt	119.00		
Change AR	-41.75		
Change CG	-1.19		
CG	142.73		

#30

9.5 nm into descent

9.5 nm at 172 kts is 3:19

3:19 at 988 fpm is 3,277' descended

10,500' - 3,277' = 7,223' MSL

7,223' MSL - 6,643' (Clingmans Dome) = 580' AGL