

WEIGHT & BALANCE EXERCICES - 1

Exercice-1	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Pilot	99.00	54.20		-15.33	
Co-Pilot	84.00	54.20		15.33	
Pass. center	71.00	15.30		30.33	
Glow Box	11.00	74.70		-19.67	
Main tank	39.00	69.80		-0.67	
Aux tank	1.00	22.00		27.67	

Take-off weight					
		C.G. Long.		C.G. Lat.	

Exercice-2	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	4.00	43.20		25.67	
Component-2		97.50	308.00		18.00
Component-3		52.90	244.00		18.00
Component-4	8.00	119.40			34.00
Component-5	75.00		310.00	-8.00	
Component-6	71.00		179.00	-23.00	

Take-off weight					
		C.G. Long.		C.G. Lat.	

Exercice-3	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	20.00			0.00	
Component-2		74.20		32.67	0.00
Component-3		31.80			-5.00
Component-4		71.70	299.00	0.00	
Component-5	0.00	47.10			0.00
Component-6	0.00				0.00
Component-7		82.90	385.00	27.33	

Take-off weight	87.81		2585.20		
		C.G. Long.		C.G. Lat.	

WEIGHT & BALANCE - 1 SOLUTIONS

Exercice-1	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Pilot	99.00	54.20	5365.80	-22.67	-1518.00
Co-Pilot	84.00	54.20	4552.80	-32.67	1288.00
Pass. center	71.00	15.30	1086.30	-21.67	2153.67
Glow Box	11.00	74.70	821.70	-25.33	-216.33
Main tank	39.00	69.80	2722.20	-24.33	-26.00
Aux tank	1.00	22.00	22.00	22.67	27.67

Take-off weight	305.00	47.77	14570.80	5.60	1709.00
		C.G. Long.		C.G. Lat.	

Exercice-2	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	4.00	43.20	172.80	25.67	102.67
Component-2	3.16	97.50	308.00	5.70	18.00
Component-3	4.61	52.90	244.00	3.90	18.00
Component-4	8.00	119.40	955.20	4.25	34.00
Component-5	75.00	4.13	310.00	-8.00	-600.00
Component-6	71.00	2.52	179.00	-23.00	-1633.00

Take-off weight	165.77	13.08	2169.00	-12.43	-2060.33
		C.G. Long.		C.G. Lat.	

Exercice-3	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	20.00	1.25	25.00	0.00	0.00
Component-2	0.00	74.20	0.00	32.67	0.00
Component-3	59.00	31.80	1876.20	-0.08	-5.00
Component-4	4.17	71.70	299.00	0.00	0.00
Component-5	0.00	47.10	0.00	0.00	0.00
Component-6	0.00	0.00	0.00	0.00	0.00
Component-7	4.64	82.90	385.00	27.33	126.94

Take-off weight	87.81	29.44	2585.20	1.39	121.94
		C.G. Long.		C.G. Lat.	