

WEIGHT & BALANCE EXERCICES - 1

Exercice-1	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Pilot	107.00	11.90		23.00	
Co-Pilot	124.00	11.90		-23.00	
Pass. center	74.00	12.20		22.00	
Glow Box	15.00	144.60		-11.67	
Main tank	36.00	67.90		13.67	
Aux tank	24.00	147.80		-9.67	

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

Exercice-2	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	7.00	128.10			14.00
Component-2		60.30	172.00		14.00
Component-3	1.00	16.10		-2.00	
Component-4		48.40	317.00		47.00
Component-5	87.00		123.00	13.33	
Component-6	112.00		264.00	-9.67	

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

Exercice-3	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1		88.20			6.36
Component-2	0.00				0.00
Component-3		95.10	416.00	0.00	
Component-4	36.00			0.00	
Component-5		47.00		-29.67	0.00
Component-6		63.40	296.00	-10.00	
Component-7	0.00	83.50			0.00

Take-off weight	79.14		3760.62		
		C.G. Long.		C.G. Lat.	

WEIGHT & BALANCE - 1 SOLUTIONS

Exercice-1	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Pilot	107.00	11.90	1273.30	-1.67	2461.00
Co-Pilot	124.00	11.90	1475.60	-23.00	-2852.00
Pass. center	74.00	12.20	902.80	24.00	1628.00
Glow Box	15.00	144.60	2169.00	-15.67	-175.00
Main tank	36.00	67.90	2444.40	-26.00	492.00
Aux tank	24.00	147.80	3547.20	2.00	-232.00

Take-off weight	380.00	31.09	11812.30	3.48	1322.00
		C.G. Long.		C.G. Lat.	

Exercice-2	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	7.00	128.10	896.70	2.00	14.00
Component-2	2.85	60.30	172.00	4.91	14.00
Component-3	1.00	16.10	16.10	-2.00	-2.00
Component-4	6.55	48.40	317.00	7.18	47.00
Component-5	87.00	1.41	123.00	13.33	1160.00
Component-6	112.00	2.36	264.00	-9.67	-1082.67

Take-off weight	216.40	8.27	1788.80	0.69	150.33
		C.G. Long.		C.G. Lat.	

Exercice-3	Weight (lbs)	Long. Arm (inch)	Moment	Lat. Arm (inch)	Moment
Component-1	34.10	88.20	3007.62	0.19	6.36
Component-2	0.00	0.00	0.00	0.00	0.00
Component-3	4.37	95.10	416.00	0.00	0.00
Component-4	36.00	1.14	41.00	0.00	0.00
Component-5	0.00	47.00	0.00	-29.67	0.00
Component-6	4.67	63.40	296.00	-10.00	-46.69
Component-7	0.00	83.50	0.00	0.00	0.00

Take-off weight	79.14	47.52	3760.62	-0.51	-40.32
		C.G. Long.		C.G. Lat.	