

# Practice Problem 1

## T-44 Weight & Balance Form DD 365-4

Using the T-44 Natops and the following information, complete a DD 365-4 form F.

Basic Weight from Chart C 6321 lbs @ 9485 Mom/100

Crew 2 @ 180 lbs each, crew baggage 30 lbs located at FS 152 (shelving behind pilot's seat), 4 lbs of O<sup>2</sup> with a mon/100 of 12, fuel maximum allowable, 3 passengers all at 200 lbs each and 200 lbs of baggage. Use *@FS 277* standard seating for your calculations.

Temperature of JP-8 is 28° C. You estimate using 1325 lbs of fuel from T/O to landing at destination.

**Hint: add up all weights to determine the maximum fuel at T/O.**

**Remember not to include start, taxi, run-up, or Takeoff fuel in your calculations.**

## T-44 Aero Practice Problem 2

Use the following information, DD Form 365-4, and the NATOPS to complete the PPC card.

### Takeoff conditions:

OAT +20° C Pressure Altitude 2,000 feet ✓  
Departure runway 18, paved, level and dry, 8,000 feet ✓  
Surface winds 140/15G25 ✓

### Climb and cruise conditions:

Climb to FL 200, and then cruise at Max Cruise Power for 2 hours ✓  
OAT at FL 200 -10° C use 60 lbs fuel for descent to destination.

### Landing Conditions:

OAT +10° C Pressure Altitude 1,000 feet ✓  
Runway 13 in use, RCR 10 due to standing water, 10,000 feet long ✓  
Use 100% flaps with no reverse ✓  
Surface winds 170/22 ✓

### Weight and Balance Information

Basic weight and Mom/100:	6355	9711 <sup>cr</sup>
2 crew @ 170 lbs each	340	
Crew baggage	25	
Emergency Equip. O <sup>2</sup>	4	12
Fuel: Fuel JP-5 290 gals ✓		
4 passengers:		
155 lbs @ FS 174 ✓		
165 lbs @ FS 174 ✓		
170 lbs @ FS 209 ✓		
180 lbs @ FS 209 ✓		
Bags 200 lbs @ FS 177 ✓		

Note: use Takeoff temp to determine fuel temp/density.

# Practice Problem # 3

## Takeoff Conditions:

OAT +10 degrees Celsius  
Pressure Altitude 5,000  
Runway 13, level and dry  
Winds 090/20G25  
Runway length 8,000 feet

## Climb and Cruise Conditions:

Cruise at FL 240 for 3 hours at Max Range Power at an IOAT of -30° C  
Use normal descent profile fuel

## Landing Conditions:

OAT +10° C at Pressure Altitude 1,000 feet  
Runway 3 with RCR of 10 due to standing water  
Winds 060/20  
Use 100% flaps with NO reverse  
Runway length is 10,000 feet

## Basic Aircraft Weight:

Crew: 2 @ 170 lbs each

Crew Bags: 20 lbs @ FS 150

Oxygen:

Fuel: 300 gals of Fuel JP-4

Passengers: 4

160 lbs @ FS 174

180 lbs @ FS 174

175 lbs @ FS 209

200 lbs @ FS 209

Bags: 200 lbs @ FS 277

Weight	MOM/100
6370	9723

4	12
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# Practice Problem # 3 Answers

## Takeoff

T/O Gross Weight: 9599 lbs CG @ 157.6 ± .1

T/O Distance: 1560 feet ± 150' Vr 90 V<sub>2</sub> 101

Min Pwr T/O: 1315 lbs

Accel/Stop: no reverse 4750 feet ± 150

Accel/Go: 1800' ± 150

Head wind component: 15 knots

## Landing

Gross Weight: 8265 lbs

Final App. Speed: 94 KIAS

Stopping Distance: 3,080' ± 150

Head wind component: 18 knots