**Aircraft name:**

**Passenger capacity: 449**

**Engine count: 4**

The total trip time required is 81.97341981845162.

Assume passenger capacity is x.

Because there are 3000 passengers need to travel in this week, and the maximum flights for this week is 12. X >= 250

1. 250 <= x < 300

CF = 0.76$/kg

ΔF = 20 \* 2 = 40kg/min

CT = 20$/min

CC = 2000

C = CF \* ΔF \* Tbest + CT \* Tbest + CC = 6131.288

When 250 <= x <= 272, Ctotal = C \* 12 = 73575.456

When 273 <= x < 300, Ctotal = C \* 11 = 67444.168

1. 300 <= x < 350

CF = 0.76$/kg

ΔF = 20 \* 4 = 80kg/min

CT = 22$/min

CC = 2500

C = CF \* ΔF \* Tbest + CT \* Tbest + CC = 9287.116

When 300 <= x <= 333, Ctotal = C \* 10 = 92871.16

When 334 <= x < 350, Ctotal = C \* 9 = 83584

1. 350 <= x < 400

CF = 0.76$/kg

ΔF = 20 \* 4 = 80kg/min

CT = 24$/min

CC = 2500

C = CF \* ΔF \* Tbest + CT \* Tbest + CC = 9451.506\

When 350 <= x <= 374, Ctotal = C \* 8 = 75612.05

When 375 <= x < 400, Ctotal = C \* 7 = 66157.35

1. 400 <= x < 450

CF = 0.76$/kg

ΔF = 20 \* 4 = 80kg/min

CT = 26$/min

CC = 2500

C = CF \* ΔF \* Tbest + CT \* Tbest + CC = 9614.996

When 400 <= x <= 428, Ctotal = C \* 7 = 67304.97

When 429 <= x < 450, Ctotal = C \* 6 = 57689.976