

# MINI PROJECT

## CHOOSING A VACATION DESTINATION

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### 1 OUR PROCEDURE

We started off by organizing the trip if it were to happen. The first day we would arrive to the hotel at 6pm, only paying for one meal and one stay. The next days we would pay for three meals a day, activities, and stay. And finally, the last we would have breakfast and then leave, only paying for one meal. We understood that our function would express  $f(x) = \text{cost per night } (x-1) + \text{cost per activity } (x - 2) + \text{cost per meal } (3(x-2)+2)$ . We simplified this function for each of the hotels and decided the best option according to our preferences.

	Dia 1	Dia 2	Dia 3	Dia 4	Dia 5
Estadia	180	180	180	180	180
Desayuno	-	35	35	35	35
Almuerzo	-	35	35	35	35
Cena	-	35	35	35	35
Eventos	-	60	60	60	60

Lugar 2

	Dia 1	Dia 2	Dia 3	Dia 4	Dia 5
Estadia	200	200	200	200	200
Desayuno	-	30	30	30	30
Almuerzo	-	30	30	30	30
Cena	-	30	30	30	30
Eventos	-	50	50	50	50

Lugar 3

	Dia 1	Dia 2	Dia 3	Dia 4	Dia 5
Estadia	150	150	150	150	150
Desayuno	-	25	25	25	25
Almuerzo	-	25	25	25	25
Cena	-	25	25	25	25
Eventos	-	40	40	40	40

### 2 BEACH TOWN

- Beachfront resort stay: \$200 per night
- Water sports activities: \$50 per day
- Dining expenses: \$30 per meal

$$C = 200(x-1) + 50(x - 2) + 30 (3(x - 2)+2)$$

$$C = 200x - 200 + 50x - 100 + 90x - 120$$

$$C = 340x - 420$$

$$x = \text{number of nights} = 5$$

$$C = 340(5) - 420$$

$$C = \$1,280$$



### 3 MOUNTAIN RETREAT

$$C = 150(x-1) + 40(x - 2) + 25 (3(x - 2)+2)$$

$$C = 150x - 150 + 40x - 80 + 75x - 100$$

$$C = 265x - 330$$

$$x = \text{number of nights} = 5$$

$$C = 265(5) - 330$$

$$C = \$995$$



- Cabin rental: \$150 per night
- Hiking and outdoor activities: \$40 per day
- Dining expenses: \$25 per meal

### 4 CITY ESCAPE

- Hotel stay: \$180 per night
- Museum and entertainment tickets: \$60 per day
- Dining expenses: \$35 per meal

$$C = 180(x-1) + 60(x - 2) + 35 (3(x - 2)+2)$$

$$C = 180x - 180 + 60x - 120 + 105x - 140$$

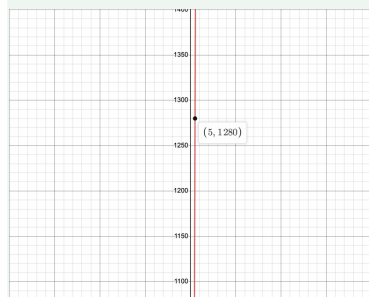
$$C = 345x - 440$$

$$x = \text{number of nights} = 5$$

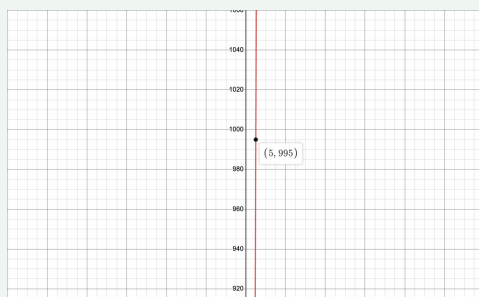
$$C = 345(5) - 440$$

$$C = \$1,285$$

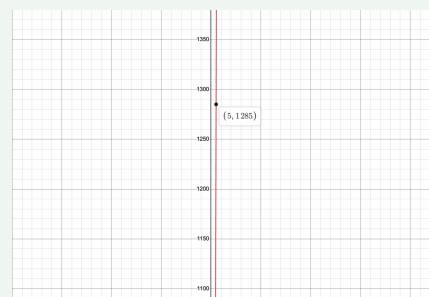
### 5 GRAPHS



Beach town



Mountain retreat



City escape

### 6 OUR PREFERENCES

Even though the most affordable option is the Mountain retreat, we personally would rather spend 285 dollars more and go to Beach town. The activities in beach town sound much more attractive to us, plus we'd be in the beach.

