Functions - Day 6

Writing a Function Rule

You can estimate the temperature by counting the number of chirps of the snowy tree cricket. The outdoor temperature is about 40°F more than one fourth the number of chirps the cricket makes in one minute. What is a function rule that represents this situation?

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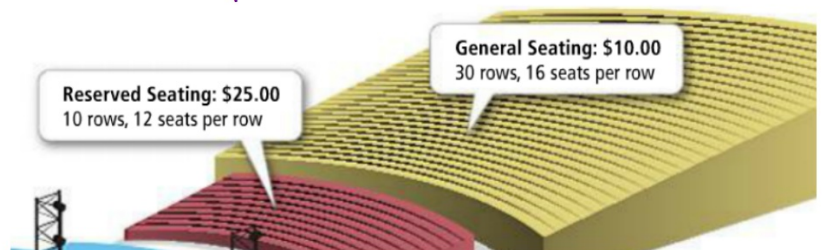
c = chirps
T = temperature

$$T = \tfrac{1}{4}c + 40$$

A landfill has 50,000 tons of waste in it. Each month it accumulates an average of 450 more tons of waste. What is the total amount of waste after m months?

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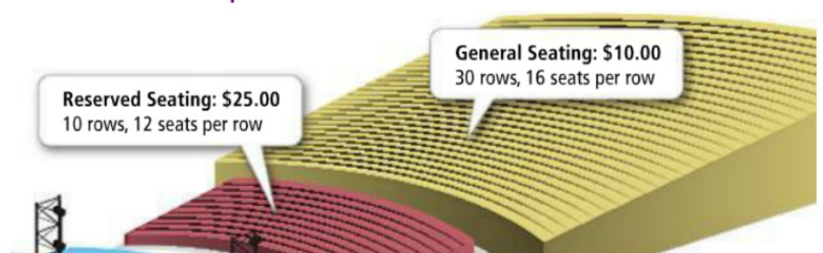
m = months
W = tons of waste

$$W = 450m + 50,000$$

A concert seating plan is shown below. Reserved seating is sold out. Total revenue from ticket sales will depend on the number of general-seating tickets sold. Write a funtion rule to represent this situation. What is the maximum possible total revenue?

General Seating: $10.00
30 rows, 16 seats per row

Reserved Seating: $25.00
10 rows, 12 seats per row

A concert seating plan is shown below. Reserved seating is sold out. Total revenue from ticket sales will depend on the number of general-seating tickets sold. Write a funtion rule to represent this situation. What is the maximum possible total revenue?

t = general-seating tickets
R = total revenue

Reserved Seating: $25.00
10 rows, 12 seats per row

General Seating: $10.00
30 rows, 16 seats per row

R = 10t + 3,000

maximum revenue: $7,800

A kennel charges $15 per day to board dogs. Upon arrival, each dog must have a flea bath that costs $12. Write a function rule for the total cost for n days of boarding plus a bath. How much does a 10-day stay cost?

Does a 5-day stay cost half as much as a 10-day stay? Explain!

A kennel charges $15 per day to board dogs. Upon arrival, each dog must have a flea bath that costs $12. Write a function rule for the total cost for n days of boarding plus a bath. How much does a 10-day stay cost?

d = days
C = total cost

$$C = 15d + 12$$

10 days: $162

Does a 5-day stay cost half as much as a 10-day stay? Explain!

no - because you only have to pay the $12 for the flea bath one time

Write a function rule for the area of a rectangle whose length is 5 ft more than its width. What is the area of a rectangle when its width is 9 ft?

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w = width
A = area

$$A = (w+5) \cdot w$$

area when width is 9 ft: 126 ft^2

Write a function rule for the area of a triangle whose height is 4 in. more than twice the length of its base. What is the area of a triangle when the length of its base is 16 in.?

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b = base
A = area

$$A = \frac{1}{2}b \cdot (2b + 4)$$

area when base is 16: 288 in^2

Homework:

Writing a Function Rule Worksheet