ACMAT117 Fall 2025 Homework 6

Name _____Date _____

TOWING SERVICE

Verbal Description

When a tow truck is called, the cost of the service is $10 plus $1 per mile that the car must be towed.

Write and graph a linear equation to represent the total cost of the towing service, which is dependent on the number of miles the car is towed.

Find and interpret the slope and y-intercept of the linear equation

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

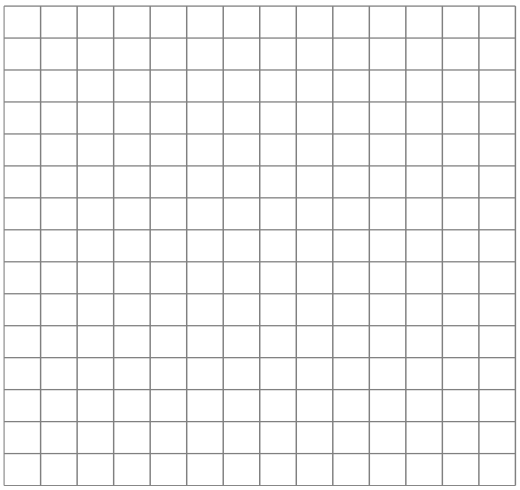
Points to Graph:

(,)

(,)

(,)

Graph



T-SHIRT SHOP

Verbal Description

Your new job is at the Custom T Shop, where T-shirts are printed to order. For each order, Custom T Shop charges $8.00 per shirt plus a one time set up fee of $15.00.

Write and graph a linear equation to show how the total cost of the T-shirts depends on how many T-shirts are ordered

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

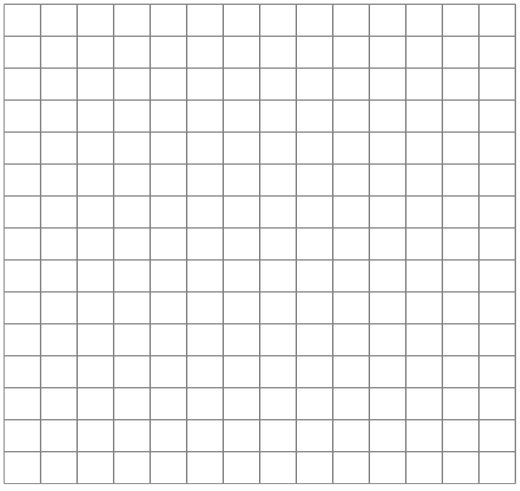
Points to Graph:

(,)

(,)

(,)

Graph



PLUMBER

Verbal Description

When a plumber is called, the cost of the service call is $50 for him to show up at your house, plus an additional $25 per hour.

Write and graph an equation to represent this relationship where *y* is the total cost of the service call and *x* is the number of hours the plumber is at your home.

Find and interpret the slope and y-intercept of the linear equation

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

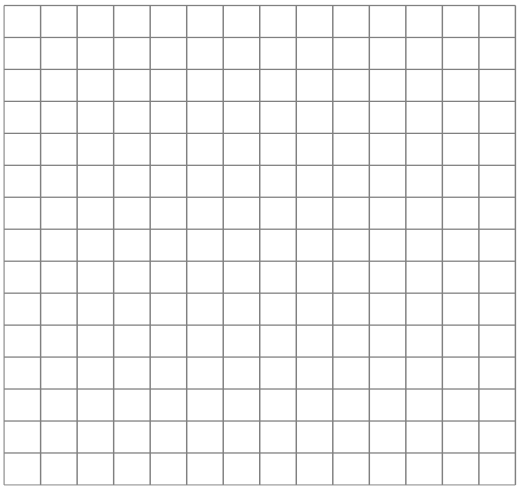
Points to Graph:

(,)

(,)

(,)

Graph



CELL PHONE CHARGES

Verbal Description

Your cell phone company charges $20 a month plus $0.50 per text message.

Write and graph an equation that shows how your total bill depends on the number of text messages sent.

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

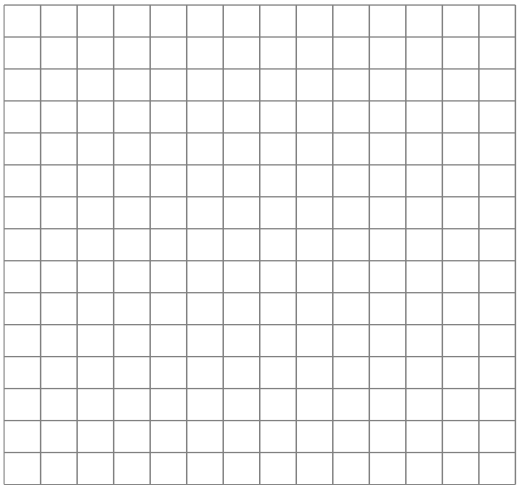
Points to Graph:

(,)

(,)

(,)

Graph



POPULATION

Verbal Description

Suppose a town has a population of 5,000 residents but that the population is decreasing by 200 people each year.

Write and graph a linear equation to represent the population of the town in terms of the year.

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

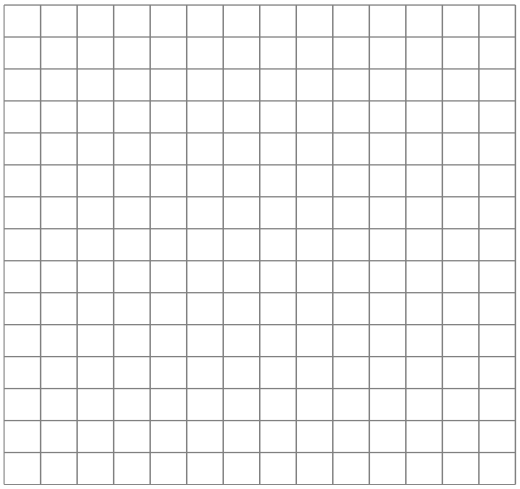
Points to Graph:

(,)

(,)

(,)

Graph



CARICATURES AT THE FAIR

Verbal Description

At a fair, Bob draws caricatures. He pays the fair $30 for space to set up a table and $2 for each drawing he sells.

Write and graph an equation to represent the total amount of money Bob pays the fair in order to sell his caricatures. Let x = the number of caricatures he sells.

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

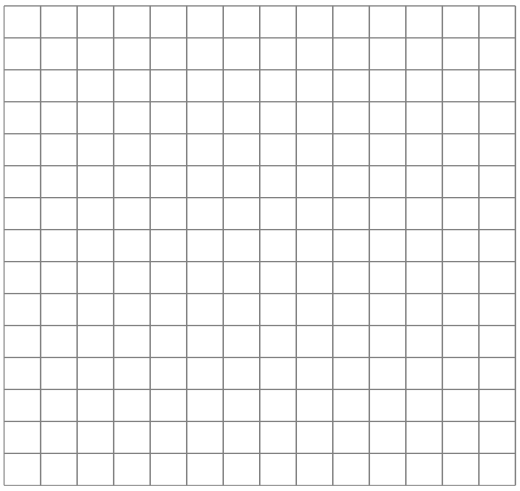
Points to Graph:

(,)

(,)

(,)

Graph



WINGS AND SHRIMP

Verbal Description

Suppose you have $60 to buy shrimp and chicken wings for a party. Shrimp costs $10/lb and wings cost $6/lb.

Write and graph a linear equation that could be used to determine the number of pounds of each food that can be purchased with $60.

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

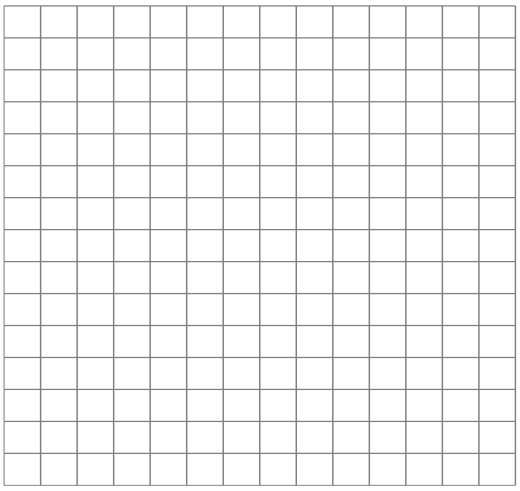
Points to Graph:

(,)

(,)

(,)

Graph



CARAMEL APPLES

Verbal Description

A vendor has learned that, by pricing caramel apples at $1.75, sales will reach 105 caramel apples per day. Raising the price to $2.75 will cause the sales to fall to 53 caramel apples per day.

Let y be the number of caramel apples the vendor sells at x dollars each. Write and graph a linear equation that models the number of caramel apples sold per day when the price is x dollars each

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

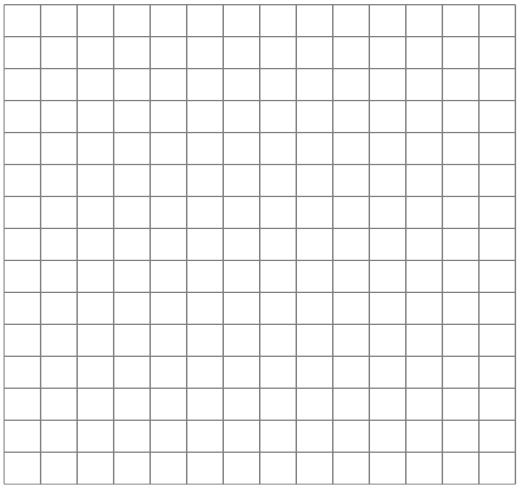
Points to Graph:

(,)

(,)

(,)

Graph



CAR VALUE

Verbal Description

The average value of a certain type of automobile was $14,220 in 1993 and depreciated to $9780 in 1997.

Let y be the average value of the automobile in the year x, where x = 0 represents 1993. Write and graph a linear equation that models the value of the automobile in terms of the year x.

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

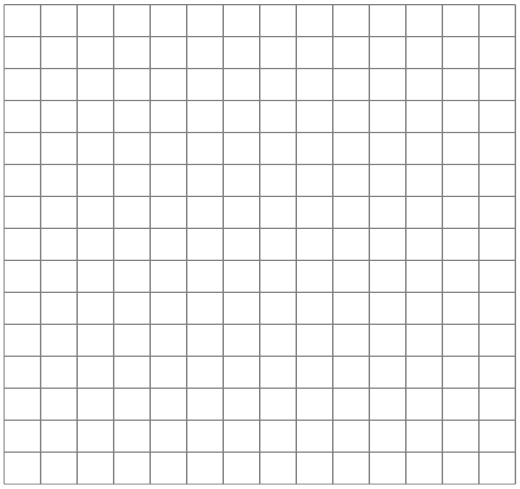
Points to Graph:

(,)

(,)

(,)

Graph



RENTAL CAR

Verbal Description

The rental rate at Rent a Wreck is $30 per day plus $0.25 per mile driven.

Write and graph a linear equation to represent the total cost to rent a car for *x* number of miles.

Equation

Define your variables:

y =

x =

Write your equation:

y =

Table of Values

X	Y

Points to Graph:

(,)

(,)

(,)

Graph