Algebra 1: 2.2 Small Group Practice **Name** _____ **Period** _____

SCENARIO #1 – TOWING SERVICE

Problem Situation

Your parents buy you a used car for your 16th birthday. Unfortunately, it breaks down on the way to school. You call a towing service to pick up the car. When the tow truck driver arrives, he informs you the cost of the service is $10 plus $1 per mile that the car needs to be towed.

How does the total cost of the towing service depend on the number of miles the car is towed?

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

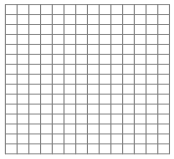
Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.



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SCENARIO #2 – T-SHIRT SHOP

Problem Situation

You get a part-time job at the Custom T-Shirt Shop in the Galleria where t-shirts are printed to order. For each order, the Custom T-Shirt Shop charges $8.00 per shirt plus an initial set up fee of $15.00.

How does the total cost of the t-shirts depend on how many t-shirts are ordered?

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

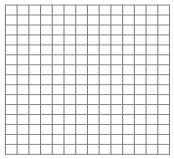
Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.



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SCENARIO #3 – CELL PHONE CHARGES

Problem Situation

You just got a new cell phone for Christmas. Unfortunately, your parents think you should pay the monthly charges. Your cell phone company charges $20 every month plus $0.50 per text message.

How does your total monthly cell phone bill depend on the number of text messages sent?

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

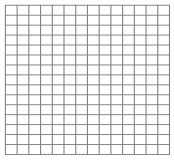
Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.



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SCENARIO #4 – POPULATION

Problem Situation

Suppose Pelham has a population of 5,000 residents, but the population is decreasing by 200 people each year as families relocate to Hoover.

How is the population in Pelham affected by time?

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

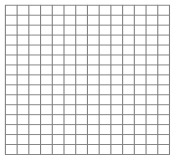
Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.



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SCENARIO #5 – CARICATURES AT THE FAIR

Problem Situation

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

How does the total amount of money that Bob pays the fair depend on the number of caricatures he sells?

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

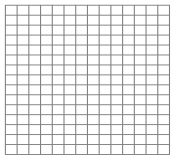
Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.



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SCENARIO #6 – PLUMBER

Problem Situation

You decide to have a costume party for Halloween. The party is a great success except that someone stuffs a roll of toilet paper down the toilet causing it to backup and overflow. You call a plumber for service who tells you that it will cost $50 for the initial house visit plus an additional $25 per hour.

How does the total cost of the plumber depend on the number of hours he spends repairing your plumbing?

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

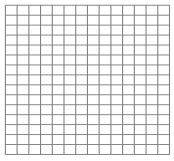
Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.



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EXIT SLIP – CREATE YOUR OWN SCENARIO

Problem Situation

Write a Linear Equation

Define your variables:

Slope/Rate of Change:

Starting Point/Y-intercept:

Write the equation using function notation.

Create a Table of Values

	Independent Quantity	Dependent Quantity
Quantity		
Units		
Expression		

Graph the Function

Label the x- and y-axes with the independent and dependent quantities and their units of measure.