Name _____ Date _____

Problems in Mathematical Terms

For each problem, determine the independent and dependent variables, write an equation to represent the situation, and then make a table with at least 5 values that models the situation.

1. Kyla spends 60 minutes of each day exercising. Let d be the number of days that Kyla exercises, and let m represent the total minutes of exercise in a given time frame. Show the relationship between the number of days that Kyla exercises and the total minutes that she exercises.

Independent Variable _____

Dependent Variable _____

Equation _____

2. A taxicab service charges a flat fee of $\$8$ plus an additional $\$1.50$ per mile. Show the relationship between the total cost and the number of miles driven.

Independent Variable _____

Dependent Variable _____

Equation _____

1. Jaziyah sells 3 houses each month. To determine the number of houses she can sell in any given number of months she uses the equation $t = 3m$, where t is the total number of houses sold and m is the number of months. Name the independent and dependent variables. Then, create a table to show how many houses she sells in fewer than 6 months.

2. Joshua spends 25 minutes of each day reading. Let d be the number of days that he reads, and let m represent the total minutes of reading. Determine which variable is independent and which is dependent. Then, write an equation that will model the situation. Make a table showing the number of minutes spent reading over 7 days.

3. Each package of hot dog buns contains 8 buns. Let p be the number of packages of hot dog buns and b be the total number of buns. Determine which variable is independent and which is dependent. Then, write an equation that will model the situation, and make a table showing the number of hot dog buns in 3 to 8 packages.

4. Emma was given 5 seashells. Each week she collected 3 more. Let w be the number of weeks Emma collects seashells and s be the number of seashells she has total. Which variable is independent and which is dependent? Write an equation to model the relationship, and make a table to show how many seashells she has from week 4 to week 10.

5. Emilia is shopping for fresh produce at a farmers' market. She bought a watermelon for $\$5$, and she also wants to buy peppers. Each pepper is $\$0.75$. Let t represent the total cost of the produce and n be the number of peppers bought. Determine which variable is independent and which is dependent, and write an equation that models the situation. Then, make a table to show the cost for 1 to 5 peppers.

6. A taxicab service charges a flat fee of $\$7$ plus an additional $\$1.25$ per mile driven. Show the relationship between the total cost and the number of miles driven. Which variable is independent and which is dependent? Write an equation to model the relationship, and make a table to show the cost of 4 to 10 miles.

For each problem, determine the independent and dependent variables, write an equation to represent the situation, and then make a table with at least 5 values that models the situation.

1. Kyla spends 60 minutes of each day exercising. Let d be the number of days that Kyla exercises, and let m represent the total minutes of exercise in a given time frame. Show the relationship between the number of days that Kyla exercises and the total minutes that she exercises.

Tables may vary.

# of Days	# of Minutes
0	0
1	60
2	120
3	180
4	240

Independent Variable *Number of Days*

Dependent Variable *Total Number of Minutes*

Equation $m = 60d$

2. A taxicab service charges a flat fee of $\$8$ plus an additional $\$1.50$ per mile. Show the relationship between the total cost and the number of miles driven.

Tables may vary.

# of Miles	Total Cost
0	8.00
1	9.50
2	11.00
3	12.50
4	14.00

Independent Variable *Number of Miles*

Dependent Variable *Total Cost*

Equation $c = 1.50m + 8$

1. Jaziyah sells 3 houses each month. To determine the number of houses she can sell in any given number of months she uses the equation $t = 3m$, where t is the total number of houses sold and m is the number of months. Name the independent and dependent variables. Then, create a table to show how many houses she sells in fewer than 6 months.

The independent variable is the number of months. The dependent variable is the total number of houses sold.

# of Months	Total Number of Houses
1	3
2	6
3	9
4	12
5	15

2. Joshua spends 25 minutes of each day reading. Let d be the number of days that he reads, and let m represent the total minutes of reading. Determine which variable is independent and which is dependent. Then, write an equation that will model the situation. Make a table showing the number of minutes spent reading over 7 days.

The number of days, d, is the independent variable.

The total number of minutes of reading, m, is the dependent variable.

$m = 25d$

# of Days	# of Minutes
1	25
2	50
3	75
4	100
5	125
6	150
7	175

3. Each package of hot dog buns contains 8 buns. Let p be the number of packages of hot dog buns and b be the total number of buns. Determine which variable is independent and which is dependent. Then, write an equation that will model the situation, and make a table showing the number of hot dog buns in 3 to 8 packages.

The number of packages, p, is the independent variable.

The total number of hot dog buns, b, is the dependent variable.

$b = 8p$

# of Packages	Total # of Hot Dog Buns
3	24
4	32
5	40
6	48
7	56
8	64

4. Emma was given 5 seashells. Each week she collected 3 more. Let w be the number of weeks Emma collects seashells and s be the number of seashells she has total. Which variable is independent and which is dependent? Write an equation to model the relationship, and make a table to show how many seashells she has from week 4 to week 10.

The number of weeks, w, is the independent variable.

The total number of seashells, s, is the dependent variable.

$s = 3w + 5$

# of Weeks	Total # of Seashells
4	17
5	20
6	23
7	26
8	29
9	32
10	35

5. Emilia is shopping for fresh produce at a farmers' market. She bought a watermelon for $\$5$, and she also wants to buy peppers. Each pepper is $\$0.75$. Let t represent the total cost of the produce and n be the number of peppers bought. Determine which variable is independent and which is dependent, and write an equation that models the situation. Then, make a table to show the cost for 1 to 5 peppers.

The number of peppers, n, is the independent variable.

The total cost, t, is the dependent variable.

$t = 0.75n + 5$

# of Peppers	*Total Cost*
1	5.75
2	6.50
3	7.25
4	8.00
5	8.75

6. A taxicab service charges a flat fee of $\$7$ plus an additional $\$1.25$ per mile driven. Show the relationship between the total cost and the number of miles driven. Which variable is independent and which is dependent? Write an equation to model the relationship, and make a table to show the cost of 4 to 10 miles.

The number of miles driven, m, is the independent variable.

The cost, c, is the dependent variable.

$c = \$1.25m + 7$

# of Miles	*Total Cost*
4	$12.00
5	$13.25
6	$14.50
7	$15.75
8	$17.00
9	$18.25
10	$19.50