**Notes: Linear Growth using Tables**

slope – intercept form of a line : *y =* ***m .*** *x +* ***b***

 *in other words . . . y =* ***(rate of change)****x +* ***beginning***

***Review* Linear Growth using Block Patterns**

 Write equations in the form of y = ***m*** . x + **b**

Review 1: Review 2: Review 3:



3

Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Equation: 

**Example 1:**

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Paul’s plumbing charges $100 for a service call and $50 for each hour of work.

Create a table of values showing possible charges for a service calls lasting from

0 to 6 hours.



Rate of change **(*m*)** ? \_\_\_\_\_\_\_

Beginning value - step 0 **(*b*)** ? \_\_\_\_\_\_\_

Write an equation *y* = **m***x* + **b** to represent the pattern \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Example 2:**

You have a pile of 50 snowballs. In a snowball fight you throw the snowballs at a rate of 2 snowballs every 5 seconds. Create a table of values showing how many snowballs you have over a 30 second period.

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 *(Count by something other than 1)*



Rate of change **(*m*)** ? \_\_\_\_\_\_\_

Beginning value - step 0 **(*b*)** ? \_\_\_\_\_\_\_

Write an equation *y* = **m***x* + **b** to represent the pattern \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Example 3:**

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Your cell phone plan costs $20 each month. For each text you send it costs $0.20.

Create a table of values showing your monthly bill if you send 0 to 60 texts.

 *(Count by something other than 1)*



Rate of change **(*m*)** ? \_\_\_\_\_\_\_

Beginning value - step 0 **(*b*)** ? \_\_\_\_\_\_\_

Write an equation *y* = **m***x* + **b** to represent the pattern \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

**Assignment: Linear Growth using Tables**

**Problem 1:**

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| **miles** | **dollars** |
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Reggie’s Rent-a-car costs $30 the first day. For each 50 miles you drive it costs $3.

Create a table of values showing the cost of renting the car for 0 to 300 miles.

 *(Count by something other than 1)*



Rate of change **(*m*)** ? \_\_\_\_\_\_\_

Beginning value - step 0 **(*b*)** ? \_\_\_\_\_\_\_

Write an equation *y* = **m***x* + **b** to represent the pattern \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem 2:** **Problem 3:**

Aaron is observing a herd of elk. When he begins his observation there are 50 elk. Every 3 months he notices there are two less elk. Create a table of values showing the population of elk over the first 18 months.

You are going on a road trip with your family.

The speed limit is 70 miles per hour on the freeway.

Create a table of values showing how many miles you have driven over the first 6 hours.

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Rate of Change (**m**) = Rate of Change (**m**) =

Beginning point (**b**) = Beginning point (**b**) =

Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem 4:** **Problem 5:**

Tim has 15 gallons of gas in his car. He uses 1 gallon of gas for every 25 miles he drives.

Create a table of values showing how much gas is in his tank over the first 150 miles.

Emma is saving for a new iPod.

She has $30 in her saving account and

deposits $15 every 2 weeks.

Create a table of values showing how much money she has in saving over the first 12 weeks.

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| **miles** | **gallons** |
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Rate of Change (**m**) = Rate of Change (**m**) =

Beginning point (**b**) = Beginning point (**b**) =

Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem 6:** **Problem 7:**

Bryson is drinking a 44 oz. soda.

He drinks 4 ounces every 5 minutes.

Create a table of values showing the amount of soda he has in his cup over 30 minutes.

Jamie builds bird houses. It takes her 3 hours to make 5 houses. She already has 6 houses completed. Create a table of values showing how many houses she has over the next 18 hours.

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Rate of Change (**m**) = Rate of Change (**m**) =

Beginning point (**b**) = Beginning point (**b**) =

Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem 8:**

Courtney owes her parents $160. She makes a plan with her parents where she pays them back $40 dollars each week. After she has paid off the debt, she will continue paying them so they can help her save for a new car.

Create a table of values showing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Rate of Change (**m**) =

Beginning point (**b**) =

Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem 9:** **You write a problem** **Problem 10: You write a problem**

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Rate of Change (**m**) = Rate of Change (**m**) =

Beginning point (**b**) = Beginning point (**b**) =

Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_