

Formative Assessment #1 Tables-Graphs-Equations

Score: ___/9

Exceeds: 9

Mastery: 8

Near Mastery: 6

ELT? Yes No

Name: Key Hour: _____

Unit 1: Thinking With Math Models

Investigation 1

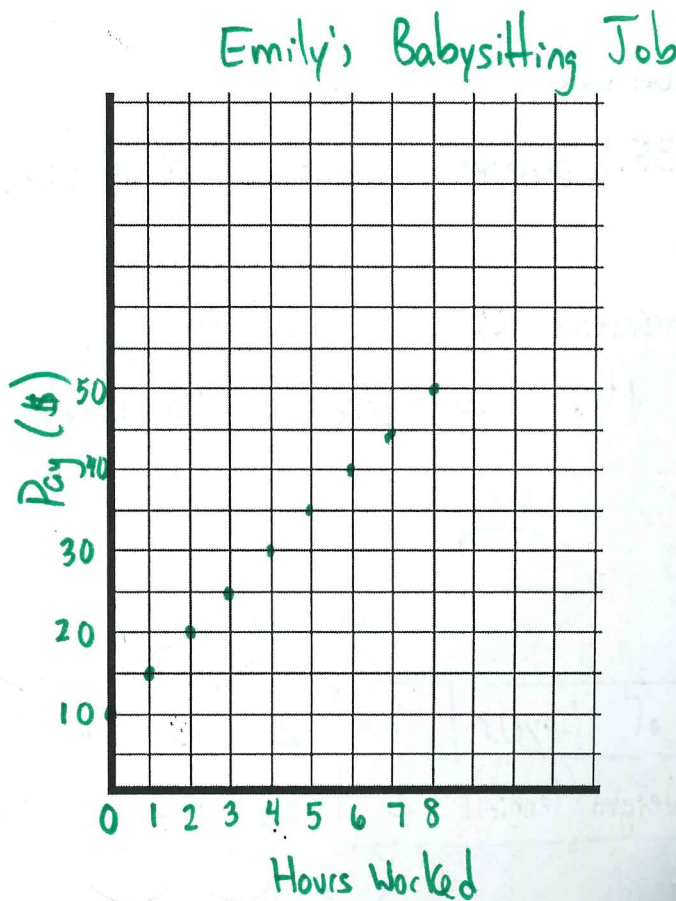
LT #1: I can represent data patterns using graphs, table, word descriptions, and algebraic expressions. *Standard 8.F.A.3*

Emily has a babysitting job. Her aunt pays her \$10 at the beginning of the week and then \$5 per hour.

1. Create a table that shows how much money Emily will have from 0 to 8 hours. (___/3 pts)

Hours Worked	Pay (\$)
0	10
1	15
2	20
3	20 25
4	30
5	35
6	40
7	45
8	50

2. Create a graph that represents the data. Make sure your graph has everything it needs. (___/5 pts)



3. Describe the pattern of change in the amount of money that Emily earns as her hours worked increases (use correct vocabulary term) (___/1 pt):

For every hour Emily works she earns 5 more dollars plus a base pay of 10.
 Emily gets \$10 for for babysitting plus \$5 more for each hour she works.

Formative Assessment #1B Predictions

Score: ___/8

Exceeds: 8

Mastery: 7

Near Mastery: 5.5

ELT? Yes No

Name: _____ Hour: _____

Unit 1: Thinking With Math Models

Investigation 1

LT #2: I can investigate linear functions in real-world contexts. *Standard 8.FA.3*

LT #3: I can use data to make predictions. *Standard 8.FA.3*

A group of students conducted the bridge-thickness experiment with construction paper. The table below contains their results.

Number of Layers	1	2	3	4	5	6
Breaking Weight (pennies)	12	20	29	42	52	61

+8 +9 +13 +10 +9

1. Suppose it is possible to use half-layers of construction paper. What breaking weight would you predict for a bridge that is 3.5 layers thick? Explain. (___/2 pts)

halfway between 29 and 42.

35.5 pennies

around 35 pennies.

$\frac{3}{2}$
-29

half of 13 is 6.5

add 6.5 to 29

2. Predict the maximum number of layers for a construction-paper bridge to hold 100 pennies. Explain how you made your prediction. (___/2 pts)

It is increasing on average 10 pennies for each layer. 100 divide by 10 = 10. I predict 10 layers would hold 100 pennies.

3. Does the relationship between the number of layers and breaking weight seem to be linear or nonlinear? (___/1 pt)

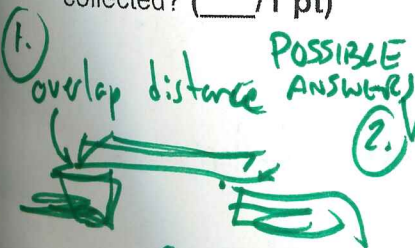
Linear

Nonlinear

4. How does the table show this relationship from #3? (___/2 pts)

Number of Layers	1	2	3	4	5	6
Breaking Weight (Pennies)	12	20	29	42	52	61

5. What other variables, other than bridge thickness, may have affected the data that the group collected? (___/1 pt)



(3.) gap

POSSIBLE ANSWERS

(2.) how the students added the pennies (dropped or set)

(4.) type of paper

The breaking weight increase by about 10 for each layer added.