

Buying on Credit Lowes is offering 0% interest for 24 months on purchases made using a Lowes store credit card. Emily purchased a Samsung Family Hub 24.2-cu ft French Door Refrigerator with Ice Maker (Stainless Steel) for \$3000 using a Lowes store credit card. Suppose she pays the minimum monthly payment of \$100 each month for the first 24 months.

a. Complete a table of (*number of monthly payments, account balance*) values for the first 6 months after the purchase.

Number of Monthly Payments	0	1	2	3	4	5	6
Account Balance (in dollars)							

b. Graph the data on a piece of graph paper. c. Will Emily pay off the balance within 24 months?

d. Write a recursive rule for the situation above. e. Write a function rule for the situation above.

f. Determine the rate of change, including units, in the account balance as the number of monthly payments increases from:

Change in Sales	Change in Account Balance	Rate of change = $\frac{\Delta y}{\Delta x} = \frac{\text{Change in Pay}}{\text{Change in Sales}}$
0 to 3		
3 to 4		
4 to 6		

g. How does the rate of change reflect the fact that the account balance *decreases* as the number of monthly payments increases?

i. How can the rate of change be seen in the graph? ii) How can the rate of change be seen in the function rule.

iii) How can the rate of change be seen in the table.

h. What was the starting account balance for the situation?

i. How can the starting balance be seen in the graph? ii) How can the starting balance be seen in the table.

iii) How can the starting account balance be seen in the function rule.