Modeling Part 1

Test Review

Evaluate.

$$f(x) = -10 + 5x$$

1. $f(2) =$ 2. $f(x) = 10$ 3. $f(-3) =$ 4. $f(x) = -$

Given the recursive rule, write the first 5 terms

1. $a_n = a_{n-1} + 5 \quad a_0 = -6$

2. $a_n = a_{n-1} - 2 \quad a_0 = 20$

3. $a_{n+1} = a_n + 3 \quad a_1 = 2$

4. $a_{n+1} = a_n - 10 \quad a_1 = -5$

Write the function rule for the given table

x	0	1	2	3	4
f(x)	-1	3	7	11	15

Write the recursive rule for the given table

n	0	1	2	3	4
a_n	-1	3	7	11	15

Write the function rule for the given table

x	1	2	3	4	5
f(x)	4	12	20	28	36

Write the recursive rule for the given table

n	1	2	3	4	5
a_n	4	12	20	28	36

Some cleaning companies have their employees go door to door to sell their products. Tim earns a base salary plus a commission on each sale. His weekly earnings depend on the number of cleaning products he sales as shown in the table

Number of Cleaning Products Sold	4	8	12	16
Weekly Earnings (in dollars)	1000	1400	1800	2200

a. Determine the **rate of change** in earnings as sales increase.

b. What would **Tim's earning** be for a week in which he **sold zero** cleaning products?

c. Use your answers from part a and b to **write a rule in function form**.

d. What would **Tim's weekly earning** be if he **sold 50** cleaning products?