MCR3U - Unit 5 Conference

Discrete Function & Sequence

Name: _____

Mark: _____ / 20

K/U	A	T	C
_____ / 6	_____ / 6	_____ / 4	_____ / 4

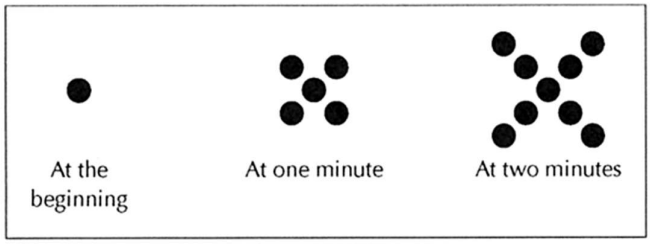
Topic 1: Birdhouse Business

You run a business making birdhouses. You spend $600 to start your business, and it costs you $5.00 to make each birdhouse.

# of birdhouses	1	2	3	4	5	6	7
Total cost to build							

1) [K] Complete the table given above and show your calculation.
2) [A] Use the function notation "f( )" to represent the relationship between the number of birdhouses and the total cost.
3) [C] Draw a graph to represent the relationship between the number of birdhouses and the total cost.
4) [T] Is the total cost to build a different number of birdhouses considered as a sequence? Analyze how a sequence is related to a discrete function.

Topic 2: Growing Dots



1) [T] Find the pattern that you see in the sequence of the three figures shown above.
2) [K] Assuming the pattern continues infinitely in the same way, how many dots are there at 3 minutes? Show your work.
3) [C] How many dots are there at 100 minutes? Show your work.
4) [A] How many dots are there at *n* minutes?
   - Find an equation to represent the relationship between the number of dots and the time (at n minutes).
   - Explain how your solution relates to the three figures given above and how you arrived at your solution.

Submission Checklist:

- Your written responses/notes in a doc or pdf format that included all the required elements.