For each of these find-a-pattern problems:
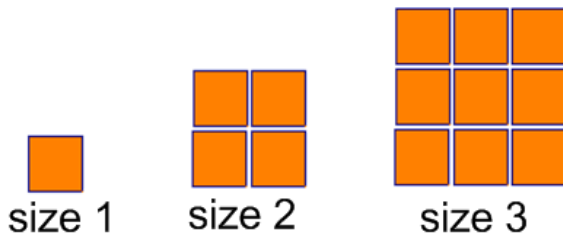   a. sketch what the next pattern should look like
   b. make a table showing what you know and what you want to find out
   c. find an algebraic expression for the pattern
   d. explain geometrically and deductively (in words) why your algebraic expression
      represents the visual pattern.
   e. answer the follow up problem for each pattern
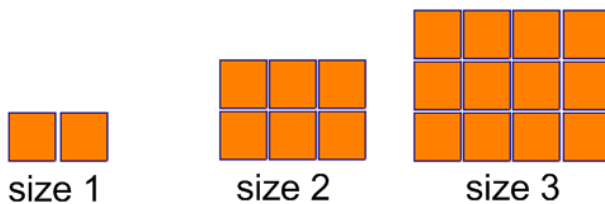
1. Find the perimeter for this pattern block train pattern:

1 car   2 cars   3 cars

e. If a train uses 18 rhombi, how many triangles does it use? Explain how you know.

2. Find the perimeter for this square pattern:

size 1   size 2   size 3

e. Is there a square with perimeter exactly 50? If so, what size is it? If not, what is the first
square pattern whose perimeter is at least 50? (Show how you know)

3. Find how many blocks it takes to build each rectangular window-pattern

size 1   size 2   size 3

e. If you have 150 blocks, what is the biggest window-pattern you could make? (Show how you
know)