

**Algebra and Representation HW #8**  
**Patterns and Recursive Formulas**

1. Extend the pattern  $\{1, 3, 6, 10, 15, 21, 28, 36 \dots\}$  for 3 more terms. Describe how you found these terms.

2. Describe the pattern of the dots below.
- How many dots are there in each of these objects?
  - If we know there are 49 dots in the 7<sup>th</sup> object, how many dots would there be in the 8<sup>th</sup> object?
  - How did you figure this out?
  - Describe in words how to find the number of dots in the next object given the number of dots in the current object.
  - Now write the statement you created in Part (d) using symbols.

