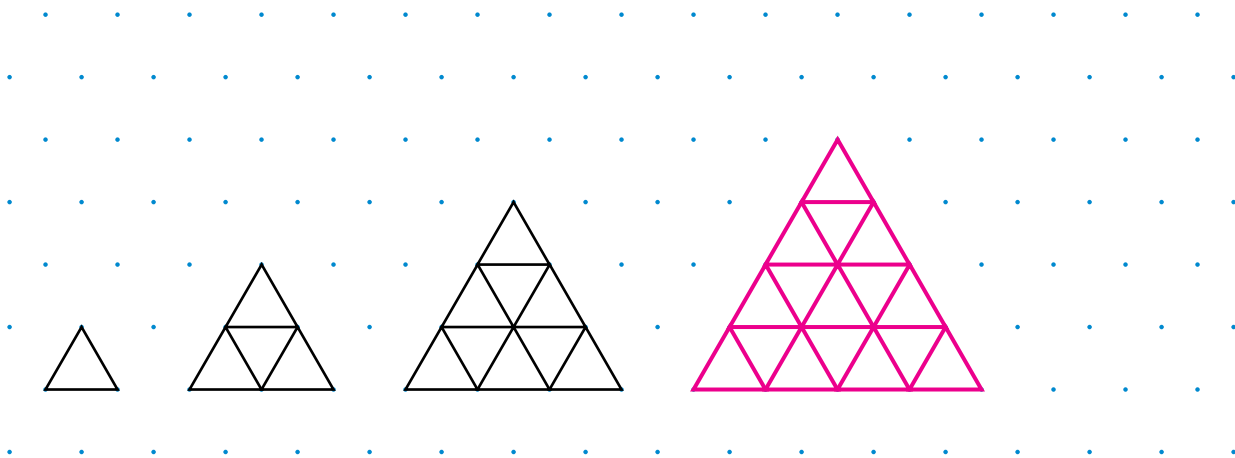


- 1 a. Draw the next shape in the pattern.



- b. Describe the rule you used to extend the pattern. **Sample answer:**  
Each bottom row has the next odd number of triangles: the first shape has 1 triangle in the bottom row, the second has 3 triangles, and the third has 5, so I knew the fourth shape would have 7 triangles in the bottom row.

- 2 a. Extend the number pattern: 1, 4, 9, 16, 25, 36, 49, 64

- b. Describe the rule you used to extend the pattern. **Sample answer:**  
I added the next odd number to the number before. So,  $25 + 11 = 36$ ,  $36 + 13 = 49$ , and  $49 + 15 = 64$ .

- c. Examine the number pattern in 2a. Write a rule involving multiplication to find these numbers. Multiply each number by itself.  $1 * 1 = 1$ ,  $2 * 2 = 4$ ,  $3 * 3 = 9$ , and so on  
 What type of numbers are these? Square numbers

- 3 a. Extend the number pattern: 1, 5, 12, 22, 35, 51, 70

- b. Describe the rule you used to extend the pattern. **Sample answer:**  
Start with 1. Add 4. Then keep adding 3 more than the number you added before.  $1 + 4 = 5$ ;  $5 + 7 = 12$ ;  $12 + 10 = 22$ ;  $22 + 13 = 35$ ;  $35 + 16 = 51$ ;  $51 + 19 = 70$