

Patterns #2

Introduction (continued)

Exercise

Consider the sequence of figures below, and assume the pattern continues.



Figure 1

Figure 2

Figure 3

1. What does Figure 4 look like? Draw it out. How many filled-in squares are in Figure 4? Illustrate on your picture how you are counting them, and write down the mathematical work you used to get the answer. *Avoid counting one-by one.*
2. Start by filling in the first 4 rows of the table below. In the column for *Work*, show the arithmetic for how you are computing the number of squares. Then look for a pattern in the table, and use it to determine the number of squares in Figure 10 without actually drawing Figure 10.

Figure Number	Work	Number of Squares
1		
2		
3		
4		
⋮	⋮	⋮
10		

3. What is the relationship between number of squares in Figures 1 and 2? What about Figures 2 and 3? Figures 3 and 4? What is the pattern?

