

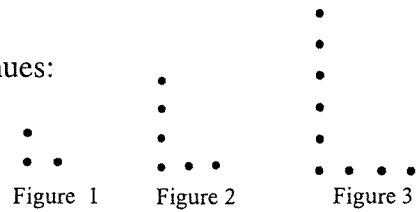
## DESCRIBING AND EXTENDING PATTERNS

Students are asked to use their observations and pattern recognition skills to extend patterns and predict the number of dots that will be in a figure that is too large to draw. Later, variables will be used to describe the patterns.

### Example

Examine the dot pattern at right. Assuming the pattern continues:

- a. Draw Figure 4.
- b. How many dots will be in Figure 10?



Solution:

The horizontal dots are one more than the figure number and the vertical dots are even numbers (or, twice the figure number).

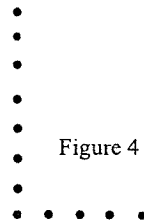


Figure 1 has 3 dots, Figure 2 has 6 dots, and Figure 3 has 9 dots. The number of dots is the figure number multiplied by three.

Figure 10 has 30 dots.

### Problems

For each dot pattern, draw the next figure and determine the number of dots in Figure 10.

