

## Algebra Concepts – Unit 1 Lesson 2

### Recognizing Visual Patterns

For each exercise below:

- Draw the next figure in the sequence
- Determine the value (number of tiles) in the next three figures
- Describe what the 10<sup>th</sup> figure looks like

#### Class example:



Figure 1

Value = 3

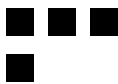


Figure 2

Value = 4

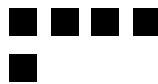


Figure 3

Value = 5



Figure 4

Value = \_\_\_\_\_

Value of Figure 5 = \_\_\_\_\_

Value of Figure 6 = \_\_\_\_\_

Describe Figure 10 (What would it look like, in words)

Guided Practice 1

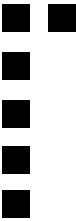


Figure 1

Value = \_\_\_\_\_

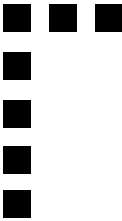


Figure 2

Value = \_\_\_\_\_

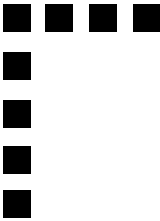


Figure 3

Value = \_\_\_\_\_

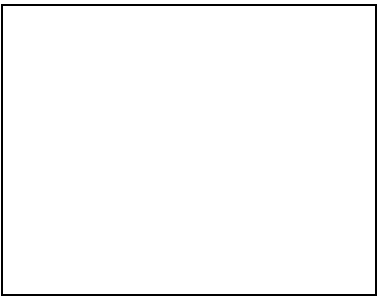


Figure 4

Value = \_\_\_\_\_

Value of Figure 5 = \_\_\_\_\_

Value of Figure 6 = \_\_\_\_\_

Describe Figure 10 (What would it look like, in words)

Guided Practice 2



Figure 1

Value = \_\_\_\_\_

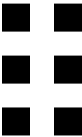


Figure 2

Value = \_\_\_\_\_

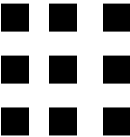


Figure 3

Value = \_\_\_\_\_



Figure 4

Value = \_\_\_\_\_

Value of Figure 5 = \_\_\_\_\_

Value of Figure 6 = \_\_\_\_\_

Describe Figure 10 (What would it look like, in words)

### Guided Practice 3

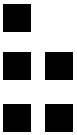


Figure 1

Value = \_\_\_\_\_

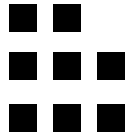


Figure 2

Value = \_\_\_\_\_

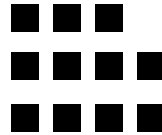


Figure 3

Value = \_\_\_\_\_

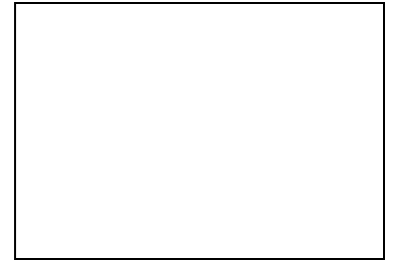


Figure 4

Value = \_\_\_\_\_

Value of Figure 5 = \_\_\_\_\_

Value of Figure 6 = \_\_\_\_\_

Describe Figure 10 (What would it look like, in words)

### Figure “n”

Now that you have discovered patterns, you are ready to express them in abstract terms using a variable. A variable is something that changes (varies) in a given situation. In algebra, a letter is used to represent a variable. We'll use ***n*** to represent the figure number in our tile examples.

Look back at each guided practice example and let's work together to determine the number of tiles in the “nth” figure.

Guided Practice 1: The nth figure has \_\_\_\_\_ tiles.

Guided Practice 2: The nth figure has \_\_\_\_\_ tiles.

Guided Practice 3: The nth figure has \_\_\_\_\_ tiles.