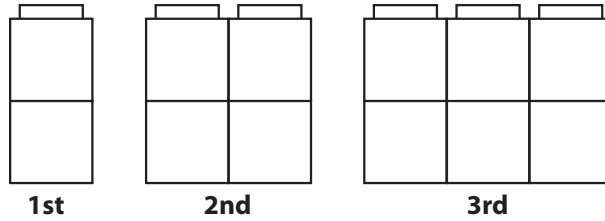




# Unifix Cube Sequence Problems page 1 of 2

Here are the first 3 arrangements in a sequence of Unifix cubes:



1st

2nd

3rd

**1** Build and draw the 4th and 5th arrangements in the sequence.

4th Arrangement	5th Arrangement

**2** Use words and/or numbers to write 3 observations about this sequence so far.

**a** \_\_\_\_\_  
\_\_\_\_\_

**b** \_\_\_\_\_  
\_\_\_\_\_

**c** \_\_\_\_\_  
\_\_\_\_\_

**3** Sam says this sequence is a growing pattern. Do you agree with Sam? Why or why not?

*(continued on next page)*

**Unifix Cube Sequence Problems** page 2 of 2

**4** Draw the 10th arrangement in this sequence. You can build it first, or you can just draw how it will look.

**5** How many cubes did it take to make the 10th arrangement in the sequence?

It took \_\_\_\_\_ cubes to make the 10th arrangement.

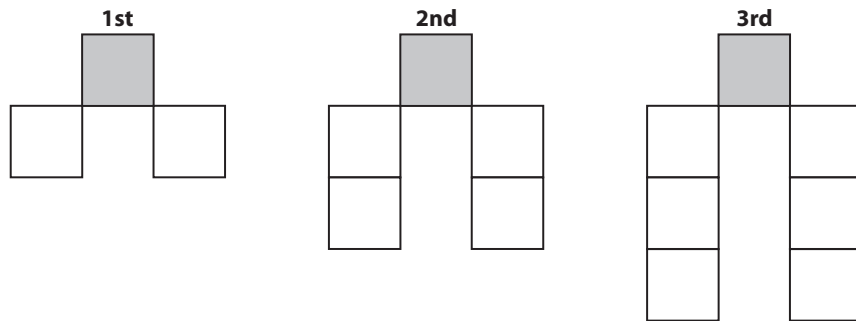
**6** **CHALLENGE** How many cubes would it take to make the 100th arrangement in this sequence? How do you know?

**7** **CHALLENGE** How many cubes would it take to make the 149th arrangement in this sequence? Show your work.



# Tile Sequence Problems page 1 of 2

Here are the first 3 arrangements in a tile sequence:



**1** Build and draw the 4th and 5th arrangements in the sequence.

<b>4th Arrangement</b>	<b>5th Arrangement</b>

**2** Use words and/or numbers to write 3 observations about this sequence so far.

**a** \_\_\_\_\_

\_\_\_\_\_

**b** \_\_\_\_\_

\_\_\_\_\_

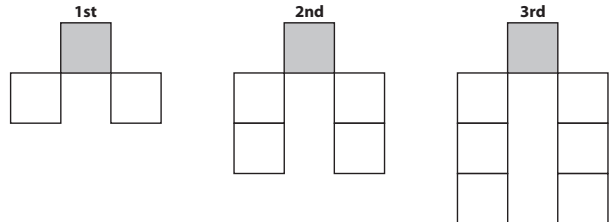
**c** \_\_\_\_\_

\_\_\_\_\_

*(continued on next page)*

**Tile Sequence Problems** page 2 of 2

- 3** Draw the 10th arrangement in this sequence. You can build it first, or you can just draw how it will look. (Hint: Make your sketch sideways to get it to fit.)



- 4** Still thinking about this sequence:

- a** How many tiles did it take to make the 5th arrangement? \_\_\_\_\_
- b** How many tiles did it take to make the 10th arrangement? \_\_\_\_\_
- c** How many tiles would it take to make the 20th arrangement? \_\_\_\_\_

- 5** **CHALLENGE** Solve these problems about the tile sequence shown above. Show your work for each.

- a** How many tiles would it take to make the 26th arrangement? \_\_\_\_\_
- b** How many tiles would it take to make the 34th arrangement? \_\_\_\_\_
- c** Which arrangement would take 31 tiles to make? \_\_\_\_\_

- 6** **CHALLENGE** What do you have to do to figure out how many tiles it takes to make any arrangement in the sequence above?