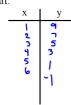
## Writing the Recursive Form From Sequences and Pictures

Find the next two numbers in the pattern:

- 2

Turn the pattern into a chart:



Describe these patterns using "next-now" statements.

Determine if the sequences listed are arithmetic. If they are, find the common difference.

We did describe patterns by...

Now we are going to describe patterns by...

Identifying an arithmetic sequence

$$-5, -8, -11, -14, -17, -20$$

$$4, -8, 16, -32, \underline{64}, -123$$

$$6, 11, 16, 21, \underline{76}, \underline{31}$$

$$1, 3, 9, 27, \underline{81}, \underline{743}$$

$$1, 0.000 + 2.000 + 3.0$$

 $y \text{ next} = \underline{\text{Now}(3)}$ 

How are patterns 1 and 3 alike?

Vou Re Adding

Sequences that fit this type of pattern are called arithmetic. In an arithmetic sequence the difference between a term and the term before it is always the same. This is called the common difference.

Patterns 2 and 4 are not arithmetic because the same number is not being added to move along the sequence.

Day 1 Homework.pdf