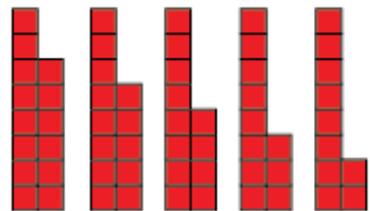# Activity 3 Assessment
Consolidating Patterns and Relations

Investigating Arithmetic Sequences

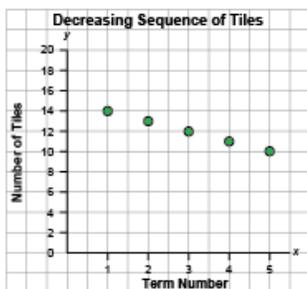| Identifies how an arithmetic sequence increases or decreases and describes the initial term and constant change | Represents arithmetic sequences in tables of values and on graphs | Identifies a rule that relates the positions and terms of an arithmetic sequence |

Term 1   Term 2   Term 3   Term 4   Term 5

"This is a decreasing sequence.
Initial term: 14 red tiles;
Constant change: take away 1 red tile."

Term Number	Number of Tiles
1	14
2	13
3	12
4	11
5	10

Decreasing Sequence of Tiles

"The table and graph show the number of tiles decreases by 1 each time. The points on the graph lie on a straight line that goes down to the right."

Term Number	Number of Tiles
1	14
2	13
3	12
4	11
5	10

"By looking at the table, I see that the number of tiles is equal to 15 minus the term number."

Observations/Documentation

Mathology 5
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Activity 3 Assessment
Consolidating Patterns and Relations

Investigating Arithmetic Sequences (cont'd)

Writes an algebraic expression that relates the positions and terms of an arithmetic sequence	Determines the missing term in an arithmetic sequence (using expression)	Fluently identifies, creates, and extends various arithmetic sequences to solve real-life problems

Term Number	Number of Tiles
1	14
2	13
3	12
4	11
5	10

"The number of tiles is equal to 15 minus the term number. I can write this rule as $15 - n$, where n represents the term number."

Term Number	Term Value
1	8
2	16
3	?
4	32
5	?
6	48

"Rule: Multiply the term number by 8 to get the term value. I can write this rule as: $8n$, where n represents the term number.
Term 3: $8n = 8 \times 3$, or 24
Term 5: $8n = 8 \times 5$, or 40."

Box	Cost to Ship ($)
1	3.50
2	7.00
3	10.50

How much would it cost to ship 9 boxes?

"To determine the shipping cost, multiply the number of boxes by $3.50. I would use the expression $3.5n$, where n is the number of boxes:
$3.5n = 3.5 \times 9$, or 31.5
So, the cost to ship 9 boxes is $31.50."

Observations/Documentation