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| **Investigating Arithmetic Sequences** | | |
| Identifies how an arithmetic sequence increases or decreases and describes the initial term and constant change    “This is a decreasing sequence.  Initial term: 14 red tiles;  Constant change: take away 1 red tile.” | Represents arithmetic sequences in tables of values and on graphs  A graph with numbers and a number of tiles  Description automatically generated  “The table and graph show the number of tiles decreases by 1 each time. The points on the graph lie on a straight linethat goes down  to the right.” | Identifies a rule that relates the positions and terms of an arithmetic sequence   |  |  | | --- | --- | | **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** | | |
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| **Investigating Arithmetic Sequences (cont’d)** | | |
| Writes an algebraic expression that relates the positions and terms of an arithmetic sequence   |  |  | | --- | --- | | **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.” | Determines the missing term in an arithmetic sequence (using expression)   |  |  | | --- | --- | | **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: 8*n*, where *n* represents the term number. Term 3: 8*n* = 8 3, or 24  Term 5: 8*n* = 8 5, or 40.” | Fluently identifies, creates, and extends various arithmetic sequences to solve real-life problems   |  |  | | --- | --- | | **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 3.5*n*, where *n* is the number of boxes:  3.5*n* = 3.5 9, or 31.5 So, the cost to ship 9 boxes is $31.50.” |
| **Observations/Documentation** | | |
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