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| **Just for fun**The first five terms for each nth term on the left can be found in the number jumble. Can you find them all?clip_image001**Revise at home** Further support and practice is available on mymaths.co.uk School login:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Password\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \*Booster packs \*Six boosters  \*Sequences  \*Sequences revision (level 6) (lesson & online Worksheet) \*Library \*Algebra \*Sequences \* nth term (level 6) (lesson & homework task) \* Quadratic sequences (level 7) (lesson & homework task) |  | **Name:****Finding the nth term of a sequence****Sequences level ladder**

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| Level | Objective | G | A | R |
| 7a | I can find the nth term of quadratic sequences  |  |  |  |
| 7c | I can find the next term of quadratic sequences  |  |  |  |
| 6a | **I can** **write an expression to describe the nth term of an arithmetic sequence.** |  |  |  |
| 6c | I can generate terms of a sequence using term-to-term and position-to-term definitions of the sequence. |  |  |  |

**Key vocabulary**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sequence  | Term | Generate | Arithmetic | Quadratic | Difference |

 **Matching activity** Use this table to record your answers.

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| --- | --- | --- |
| **Sequence** |  **nth term** | **Comments** |
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| **More Level 6** **1** Find the next three terms in each of these sequences:**a** 1, 5, 9, 13, \_\_\_\_, \_\_\_\_, \_\_\_\_, ……….**b** 2, 9, 16, 23, \_\_\_\_, \_\_\_\_, \_\_\_\_, ………**2** Write down the first four terms of the following sequences:   **a** 4*n* + 5 **b**  2*n* – 3**3** Find the *n*th term of each of the following sequences:  **a** 8, 15, 22, 29, 36, ………… **b** 43, 51, 59, 67, 75, ……….. **c** 21, 19, 17, 15, 13,…………. **d** -11, -9, -7, -5, -3,………..   |

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| **Into Level 7****1** Find the next three terms in each of these sequences:**a** 6, 12, 20, 30, \_\_\_\_, \_\_\_\_, \_\_\_\_, ……….**b** 2, 5, 10, 17, \_\_\_\_, \_\_\_\_, \_\_\_\_, ………**2** Write down the first four terms of the following sequences:   **a** *n*2 +5  **b** *n* (*n* +3) **3** Find the *n*th term of each of the following sequences:  **a**  1, 4, 9, 16, 25, …………….. **b** 3, 6, 11, 18, 27, …………….. **c** 2, 8, 18, 32, 50……………. **d** ½, 2, 4 ½, 8, 12 ½, ………….   |

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