**Sequences, functions and graphs (F)**

Pre-Intervention Assessment

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Question** | **Objective** | **RAG** |
|  1 | Recognise a term-to-term rule |  |
|  1 | Calculate the nth term of a sequence |   |
|  2 | Sketch straight line graphs |   |
|  2 | Solve simultaneous equations graphically |   |
|  3 | Recognise parallel graphs using their gradients  |   |

**1.** Here are the first five terms of a number sequence.

7 11 15 19 23

**(a)** Write down the next two terms of the number sequence.

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**(b)** Explain how you found your answer.

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 The 20th term of the number sequence is 50

**(c)** Write down the 21st term of the number sequence.

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**(d)** Calculate the nth term rule of the sequence.

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**2. (a)** Complete the table of values for y = 2x + 1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **x** | -2 | -1 | 0 | 1 | 2 | 3 |
| **y** |  | -1 | 1 |  |  |  |

**(b)** On the grid, draw the graph of y = 2x + 1

**(c)** Use the graph you have just drawn to solve the following simultaneous

equations:

y = 2x + 1

y = 3



**3.** Which of the following graphs are parallel? Circle the 2 you have chosen.

 y = 2x + 1 y = ¼x +1 y = 2x + 4 y = 4x - 1

Explain your reasoning.

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[Glue here]