MEMORANDUM

Name: ..... Class: .....

Date: .....

MARK ____ / 18

Answer all questions. Show all your working — marks are awarded for method as well as the final answer. **Teacher copy: accept any correct equivalent method.**

1 Write the next three terms: 6, 11, 16, 21, ... (2)

Difference +5 → **26, 31, 36** ✓✓ (2)

2 Write the next three terms: 45, 38, 31, 24, ... (2)

Difference −7 → **17, 10, 3** ✓✓ (2)

3 Write the next three terms: 3, 9, 27, 81, ... (2)

Ratio ×3 → **243, 729, 2 187** ✓✓ (2)

4 Write the next three terms: 160, 80, 40, 20, ... (2)

Ratio ÷2 → **10, 5, 2,5** ✓✓ (2)

5 Write the next two terms: 1, 4, 9, 16, 25, ... (2)

Square numbers → **36, 49** ✓✓ (2)

6 Write the next two terms: 1, 3, 6, 10, 15, ... (2)

Triangular; differences 2,3,4,5,6... → **21, 28** ✓✓ (2)

7 Write the next two terms: 1, 1, 2, 3, 5, 8, ... (2)

Add the two before → **13, 21** ✓✓ (2)

8 A pattern of tiles gives 5, 9, 13, ... How many tiles in the 5th shape? (2)

Difference +4 → 5, 9, 13, 17, **21 tiles** ✓✓ (2)

9 Is 2, 6, 18, 54 a constant-difference or constant-ratio pattern? Give the value. (2)

Constant ratio, ×3 (differences 4, 12, 36 are not constant) ✓✓ (2)

TOTAL: 18 marks

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