Number Patterns: Finding and Using the Rule

WORKSHEET

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

Date: .....

MARK ____ / 26

Answer all questions. Show all your working — marks are awarded for method as well as the final answer.

1 Find the rule for 7, 10, 13, 16, ... *(find rule)* (2)

2 Find the rule for 2, 6, 10, 14, ... *(find rule)* (2)

3 For $T_n = 5n + 1$, find the 10th term. *(far term)* (2)

4 Find the 100th term of 4, 7, 10, ... *(far term)* (2)

5 Which term of 4, 7, 10, ... equals 100? *(work back)* (2)

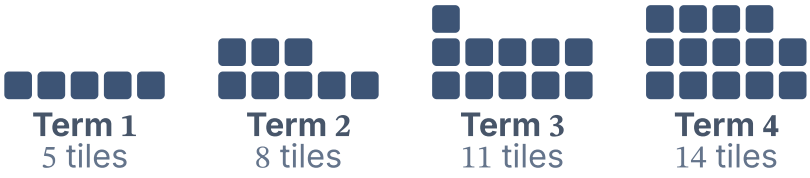
⤢ Tap any diagram to enlarge it

6 Which term of 5, 9, 13, ... equals 81? *(work back)* (2)

7 Find the rule for 30, 25, 20, 15, ... *(decreasing)* (2)

8 Find the rule for 12, 9, 6, 3, ... *(decreasing)* (2)

9 The tile pattern below grows in the same way each time. Determine a rule for the number of tiles in the n-th term. (3)



10 Is 45 a term of 3, 7, 11, ...? *(check)* (2)

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11 Position: 1 ; 2 ; 3 ; 4 and value: 1 ; 7 ; 13 ; 19. Find the rule and the value in position 25. **(3)**

12 Describe the rule of 4 ; 9 ; 14 ; 19 ; ... in words. **(2)**

TOTAL: 26 marks

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