Pattern Rules: In Words and in Algebra

WORKSHEET

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

Date: .....

MARK ____ / 23

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

1 Describe in words the rule for 4, 9, 14, 19, ... (2)

2 Determine the general rule (T_n) for 4, 9, 14, 19, ... (3)

3 Determine the general rule for 7, 12, 17, 22, ... (2)

4 Determine the general rule for 6, 11, 16, 21, ... (2)

5 Determine the general rule for 30, 26, 22, 18, ... (2)

6 For $T_n = 4n + 3$, find the 10th term. **(2)**

7 For $T_n = 6n - 2$, find the 25th term. **(2)**

8 Which term of $5, 9, 13, \ldots$ equals 45? **(2)**

9 Is 100 a term of the pattern $3, 7, 11, \ldots$? Show your working. **(3)**

10 A pattern of matchsticks is $4, 7, 10, \ldots$ Determine a rule for the number of sticks in shape n. **(3)**

TOTAL: 23 marks

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