



Assignment 4

Matchstick patterns

Learner's Book page 187

Suggested answers

Introduction: The purpose of the assignment is to:

- 1 construct certain shapes
- 2 notice the patterns
- 3 determine formulae.

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Term number (n)	Number of small squares (s)	Perimeter of L-shape (P)	Number of matches (m)
1	3	8	10
2	5	12	16
3	7	16	22
4	9	20	28
5	11	24	34

2 a $s = 2n + 1$

b $P = 4n + 4$

c $m = 6n + 4$

- 3 a The number of small squares increases by two each time, therefore the coefficient of n is 2. The number of squares in the first term minus 2 is 1, therefore the constant is 1.
- b The number of matches in the perimeter increases by 4 in each term, therefore the coefficient of n is 4. The perimeter of the first term minus 4 is 4, therefore the constant is 4.
- c The number of matches for each term increases by 6 in each term, therefore the coefficient of n is 6. The number of matches in the first term minus 6 is 4, therefore the constant is 4.