2.3 Algebra: Sequences and Graphs: 10-minute Pack

Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Answer the following about special sequences.

(a) Write down the first five triangular numbers. **(1)**

.....

(b) Write down the first five square numbers, starting from 1^2. **(1)**

.....

(c) A Fibonacci-type sequence starts 1, 1, 2, 3, 5, ... Write down the next three terms. **(2)**

.....

2 The nth term of a sequence is given by the expression $3n + 2$.

(a) Work out the 1st, 2nd and 3rd terms of the sequence. **(1)**

.....

(b) Work out the 10th term of the sequence. **(1)**

.....

(c) A term in the sequence is 47. Work out its position, n, in the sequence. **(2)**

.....

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Mark scheme · 2.3 Algebra: Sequences and Graphs: 10-minute Pack

Question 1

(a) 1, 3, 6, 10, 15 all correct	**B1**
(a) Answer: **1, 3, 6, 10, 15**	
(b) 1, 4, 9, 16, 25 all correct	**B1**
(b) Answer: **1, 4, 9, 16, 25**	
(c) first two terms 8 and 13 correct	**B1**
(c) third term 21 correct	**B1**
(c) Answer: **8, 13, 21**	

Question 2

(a) 5, 8, 11 all correct	**B1**
(a) Answer: **5, 8, 11**	
(b) 32 cao	**B1**
(b) Answer: **32**	
(c) correct equation $3n + 2 = 47$ or $3n = 45$	**M1**
(c) n = 15 cao	**A1**
(c) Answer: **n = 15**	

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