1.12 Pure: Sequences, Series and Binomial Depth: 10-minute Pack

EDEXCEL 9MA0 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A geometric sequence has first term 6 and third term 54.

(a) Find the possible value(s) of the common ratio, r. **(3)**

(b) Given that all terms of the sequence are positive, find the 7th term. **(2)**

(Total for Question 1 is 5 marks)

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2 An arithmetic sequence has first term 5 and common difference 3. Find the 6th term.

(Total for Question 2 is 1 mark)

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3 An arithmetic sequence has 3rd term 11 and 8th term 31. Find the common difference and the first term.

(Total for Question 3 is 2 marks)

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Mark scheme · 1.12 Pure: Sequences, Series and Binomial Depth: 10-minute Pack

Question 1

(a) forms $6r^2=54$	**M1**
(a) solves $r^2=9$	**M1**
(a) both r=3 and r=-3 stated (oe)	**A1**
(a) Answer: r = 3 or r = -3	
(b) correct substitution $u7=6(3)^6$	**M1**
(b) 4374 cao	**A1**
(b) Answer: 4374	

Question 2

20 cao	**B1**
Answer: 20	

Question 3

forms 5d = 31 - 11 = 20 (or equivalent simultaneous equations)	**M1**
d = 4 and a = 3	**A1**
Answer: d = 4, a = 3	

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