



Sequences

Answers

1

Sample A Foundation Non-Calc Paper 1

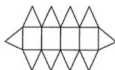
- 12 Here are the first three patterns in a sequence.
The patterns are made from triangles and rectangles.



pattern number 1



pattern number 2



pattern number 3

- (a) How many triangles are there in pattern number 7?

1	2	3	4	5	6	7	
6	8	10	12	14	16	<u>18</u>	(1)
		(1)					18

(2)

Charlie says

"There are 4 rectangles in pattern number 3 so there will be 8 rectangles in pattern number 6"

- (b) Is Charlie right?
Give a reason for your answer.

1	2	3	4	5	6	
2	3	4	5	6	7	(1)

No there will be 7 NOT 8 as you can see from the table (1)

(Total for Question 12 is 3 marks)

Sample B Foundation Calc Paper 2

- 11 The first three terms of a number pattern are 1 2 4

Hester says the first five terms of this number pattern are 1 2 4 8 16

- (a) Write down the rule Hester could have used to get the 4th and 5th terms.

to find the next term he multiplies
the previous term by 2

- (b) Write down the 6th term of Hester's number pattern.

$$16 \times 2 = \underline{\underline{32}}$$

Jack uses a different rule.

He says the first six terms of the number pattern are 1 2 4 7 11 16

- (c) Write down the 7th and 8th terms of Jack's number pattern.

$$\begin{array}{ccccccccc} 1 & 2 & 4 & 7 & 11 & 16 & 22 & 29 \\ +1 & +2 & +3 & +4 & +5 & +6 & +7 & \end{array}$$

22, 29

(Total for Question 11 is 3 marks)