

The number of dots,  $D$ , and the number of unit lines that form the perimeter of the shape,  $P$ , form a pattern. The values for  $D$  and  $P$  for the first 3 figures are written in the table below. Study the pattern of numbers in each row of the table.

Complete the rows numbered (i), (ii) and (iii).

	Figure Number	Number of Dots ( $D$ )	Perimeter of Figure ( $P$ )	
	1	8	8	
	2	16	14	
	3	24	20	
(i)	4	_____	_____	(2 marks)
	$\vdots$	$\vdots$	$\vdots$	
(ii)	_____	_____	86	(2 marks)
	$\vdots$	$\vdots$	$\vdots$	
(iii)	$n$	_____	_____	(2 marks)

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- (b) The number of lines,  $L$ , in each shape and the perimeter,  $P$ , of the shape follow a pattern. Study the pattern of numbers in each row of the table below and answer the questions that follow.

Complete the table below showing the number of lines and the perimeter of each figure.

	Figure	Number of Lines ( $L$ )	Perimeter ( $P$ )	
	1	6	5	
	2	11	8	
	3	16	11	
	$\vdots$	$\vdots$	$\vdots$	
(i)	5	_____	_____	(2 marks)
	$\vdots$	$\vdots$	$\vdots$	
(ii)	_____	66	_____	(2 marks)
	$\vdots$	$\vdots$	$\vdots$	
(iii)	$n$	_____	_____	(2 marks)

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Complete Rows (i), (ii) and (iii).

	Figure	Number of Sticks ( $S$ )	Number of Dots ( $D$ )	
	1	12	13	
	2	24	25	
	3	36	37	
	4	48	49	
(i)	5	_____	_____	(2 marks)
	$\vdots$	$\vdots$	$\vdots$	
(ii)	_____	156	_____	(2 marks)
	$\vdots$	$\vdots$	$\vdots$	
(iii)	$n$	_____	_____	(2 marks)