

Summer Term Maths Year 10

Use the n th term of a sequence

Day
4

Week 12

1 Write the first 5 terms of the following sequences.

- a) $3n + 6$
- b) $3n - 2$
- c) $10 - n$
- d) $4 + 0.5n$

2 Find the n th term and the 20th term of the following sequences.

- a) 3, 5, 7, 9, ...
- b) 1, 5, 9, 13, 17, ...
- c) 3, 6, 9, 12, 15, ...
- d) 17, 12, 7, 2, -3, ...
- e) 120, 101, 82, 63, ...
- f) 13.4, 13.8, 14.2, 14.6, ...

3 Here are 3 sequences,

$$4n - 1$$

A

$$n + 5$$

B

$$100 - 2n$$

C

- a) What is the first term of each sequence?
- b) Which sequence has the greatest 10th term?
- c) Do any of the sequences contain the number 71? Which ones?

4 Is the number 105 in the following sequence given by the formulae $5n+4$? How do you know?

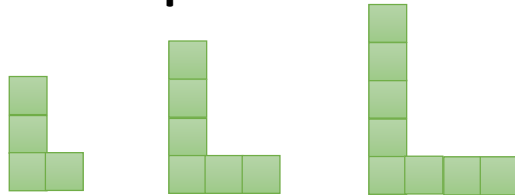
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5 Here is a sequence.



How many squares make up the 15th shape? Explain your method.

6



The 8th term of the sequence $4n + 7 = 39$. This means the 16th term is 78.

Explain why Dexter might think this.
What mistake has he made?

7 Complete the table.

First term	Common difference	n th term	49 th term
7	3		
		$5 + 4n$	
38			134

8 A shape is made by joining regular hexagons as shown below. The hexagons have a side length of 0.3 cm. How many hexagons are required for the shape to have a perimeter of 36.6 cm?

