

ACTION

Revision Material



<https://www.youtube.com/watch?v=HmGHK2Rq9A>



<https://www.youtube.com/watch?v=qGdmScuQ15w>

RESPONSE

Fluency



Find the missing terms

- 1) 2, 6, 12, 20, ____
- 2) 2, 8, 18, ____, 50
- 3) 1, ____, 8, 16, 27
- 4) ____, 0, 5, 11, 18
- 5) 10, 8, 5, ____, ____
- 6) -6, -11, ____, -36, -56

Generate the first 3 terms

- 1) $n^2 + 5$
- 2) $5n^2 - 4$
- 3) $2n^2 + n$
- 4) $2n^2 - 3n + 10$
- 5) $-3n^2$
- 6) $7 + 5n - 2n^2$

Find the nth term rule

- 1) 4, 16, 36, 64, 100,
- 2) -4, -1, 4, 11, 20,
- 3) 5, 14, 29, 50, 77,
- 4) 2, 9, 20, 35, 54,
- 5) 4, 9, 16, 25, 36,
- 6) -2, -4, -10, -20, -34,

Reasoning



Can you come up with a quadratic sequence that:

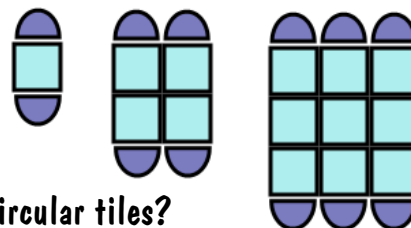
- a) Contains the linear rule $3n + 1$?
- b) Starts with 3 negative terms?
- c) Has a rule starting n^2 and has 20 as the third term?

Give the first 5 terms and the rule for each.

Problem Solving



- a) Draw the next pattern in the sequence.
- b) How many square tiles and how many semi-circular tiles will there be in pattern 7?
- c) What is the nth term rule for the number of semi-circular tiles?
- d) Lilly says that there will be a pattern containing 9999 tiles in total, prove she is correct.



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