

Algebra 1 - Arithmetic and Geometric Sequences - Test

Common Core F-IF.A.3, F-BF.A.1a, F-BF.A.2, F-LE.A.2 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This test checks arithmetic and geometric sequences for Common Core F-IF.A.3, F-BF.A.1a, F-BF.A.2, and F-LE.A.2. It has 9 questions worth 20 points in all, and you have 45 minutes. Write clear steps, because points are awarded for method as well as for the final answer. Leave a few minutes to review.

About this test

- Grade: Algebra 1
- Chapter: Arithmetic and Geometric Sequences
- Standards: F-IF.A.3, F-BF.A.1a, F-BF.A.2, F-LE.A.2
- Time: 45 minutes
- Total: 20 points

Question 1 - Next term [2 pts]

- Find the next term of 2,10,50,250 and name the type of sequence. (1 point)
- Find the next term of 30,24,18,12 and name the type of sequence. (1 point)

Question 2 - Explicit rule [2 pts]

Write an explicit rule for 6,10,14,18 and find a_{15} .

Question 3 - Recursive rule [2 pts]

Write a recursive rule for 100,90,80,70.

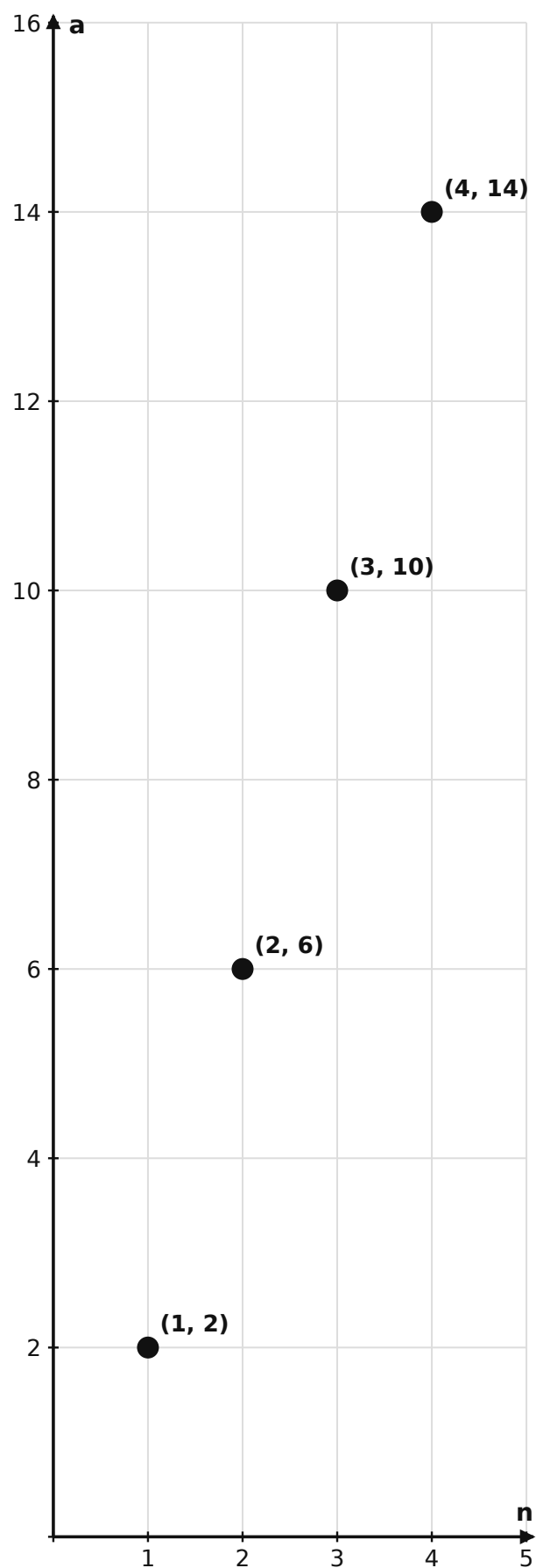
Question 4 - Geometric rule [2 pts]

Write an explicit rule for 2,6,18,54 and find a_5 .

Question 5 - Two terms given [2 pts]

An arithmetic sequence has $a_2=9$ and $a_5=18$. Write an explicit rule.

Question 6 - Rule from a graph [2 pts]



Graph for question 6.

The graph shows the first four terms of an arithmetic sequence. Write an explicit rule.

Question 7 - Savings plan [3 pts]

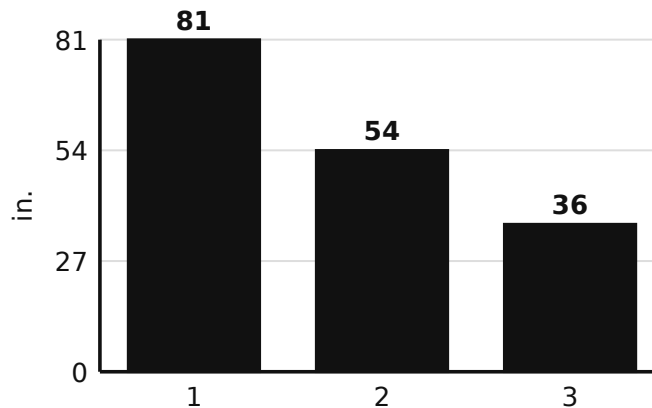
Week	1	2	3	4
Savings	\$20	\$28	\$36	\$44

Ethan's savings.

Ethan's weekly savings form an arithmetic sequence.

- Write an explicit rule for week n . (1 point)
- Find the amount in week 10. (1 point)
- Find the first week in which he saves more than \$150. (1 point)

Question 8 - Bounce heights [3 pts]



Bounce heights in inches.

A ball's first three bounces reach 81, 54, and 36 inches.

- Find the common ratio. (1 point)
- Write an explicit rule. (1 point)
- Find the height of the 4th bounce. (1 point)

Question 9 - Compare sequences [2 pts]

Sequence A is 5,10,15,20, and sequence B is 5,10,20,40. Find the 6th term of each and say which

sequence grows faster.