

Pre Calculus 11,2 Arithmetic Sequence and Series

Lesson 201 | Precalculus | Arithmetic sequences and series

<https://www.youtube.com/watch?v=36yYJxeioOk>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

An arithmetic sequence starts at 14 with common difference 4. Find term 8 and the sum of the first 8 terms.

02

An arithmetic sequence starts at 13 with common difference 12. Find term 7 and the sum of the first 7 terms.

03

An arithmetic sequence starts at 10 with common difference 11. Find term 9 and the sum of the first 9 terms.

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04

An arithmetic sequence starts at 8 with common difference 12. Find term 10 and the sum of the first 10 terms.

05

An arithmetic sequence starts at 2 with common difference 8. Find term 9 and the sum of the first 9 terms.

06

An arithmetic sequence starts at 3 with common difference 12. Find term 11 and the sum of the first 11 terms.

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01

An arithmetic sequence starts at 14 with common difference 4. Find term 8 and the sum of the first 8 terms.

$$a_m = 14 + (m-1)4; a_8 = 42. S_m = m(a_1 + a_m)/2, \text{ giving } S_8 = 224.$$

02

An arithmetic sequence starts at 13 with common difference 12. Find term 7 and the sum of the first 7 terms.

$$a_m = 13 + (m-1)12; a_7 = 85. S_m = m(a_1 + a_m)/2, \text{ giving } S_7 = 343.$$

03

An arithmetic sequence starts at 10 with common difference 11. Find term 9 and the sum of the first 9 terms.

$$a_m = 10 + (m-1)11; a_9 = 98. S_m = m(a_1 + a_m)/2, \text{ giving } S_9 = 486.$$

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04

An arithmetic sequence starts at 8 with common difference 12. Find term 10 and the sum of the first 10 terms.

$$a_m = 8 + (m-1)12; a_{10} = 116. S_m = m(a_1 + a_m)/2, \text{ giving } S_{10} = 620.$$

05

An arithmetic sequence starts at 2 with common difference 8. Find term 9 and the sum of the first 9 terms.

$$a_m = 2 + (m-1)8; a_9 = 66. S_m = m(a_1 + a_m)/2, \text{ giving } S_9 = 306.$$

06

An arithmetic sequence starts at 3 with common difference 12. Find term 11 and the sum of the first 11 terms.

$$a_m = 3 + (m-1)12; a_{11} = 123. S_m = m(a_1 + a_m)/2, \text{ giving } S_{11} = 693.$$