

Warm Up: Pre - Calc

8/21 Day 3

Describe the pattern and give the next 3 terms.

- 1) -16, -14, -12, ... 2) 6, -2, -10, ...

Given the sequence: $\{a_n\} = \{3, 7, 11, 15, \dots\}$

- 3) What is the seventh term? How do you know?
4) 7 is what term number?

Feb 27-7:39 AM

Solutions to W.U.: Pre-Calc

- 1) -16, -14, -12, -10, -8, -6 (subtract 2)
2) 6, -2, -10, -18, -26, -34 (subtract 8)
3) 3, 7, 11, 15, ..., 19, 23, 27
4) 7 is the second term

Dec 31-10:07 PM

W.A.L.T.:

Day 3

- Define and understand subscript notation.
- Define and understand arithmetic sequence

W.A.S.I.:

We can use our understanding of recursive thinking to understand arithmetic sequences and write a recursive formula.

Mar 7-9:45 AM

Solutions to P.W.: pg. 3 - 4 #1 - 5

Went over 8/22

Dec 31-10:07 PM

Notes!!! Subscript Notation

Subscript Notation denotes the which specific term in the sequence is being described.

Where a_n is the n^{th} term in the sequence.

$$\{a_n\} = \{3, 6, 9, 12\dots\}$$

Can someone translate that into English?

Dec 31-10:01 PM

In Class Work:**Day 3**

Consider the sequence $a_n = \{4, 6, 8, 10, 12\}$

- 1) What is a_3 ?
- 2) What is a_5 ?
- 3) What is the difference between each term?
What does that expression look like using subscript notation?

Mar 7-1:33 PM

Notes!!! Arithmetic Sequence

An Arithmetic Sequence is a sequence in which the difference of each consecutive term is a constant.

↳ adding/subtracting

The common difference of a sequence is the constant change of between each term. Usually represented by the letter d.

Can someone translate that into English?

Dec 31-10:01 PM

In Class Work:

Day 3

Determine whether each sequence is arithmetic. If the sequence is arithmetic, state the common difference.

1) 3, 8, 13, 18, 23, ...

$$a_6 = a_5 + 5$$

2) 1, 2, 4, 8, 16, ...

3) Find the missing terms in the arithmetic sequence
19, 28, ____, ____, 55, ____.

Mar 7-1:33 PM

In Class Work:

Day 3

$$a_n = a_{n-1} + d$$

sequence

common diff.

What in the what is going on here?

$$a_8 = a_7 + 2$$

Mar 7-1:33 PM

Today's Activities:

- Notes

P.W. for tonight:

- Will be up loaded to the website
pg. 298 #21 - 25 (See next page)

Day 4

Dec 31-9:59 PM

For Items 21–23, determine whether each sequence is arithmetic. If the sequence is arithmetic, then

- state the common difference.
- use the explicit formula to write a general expression for a_n in terms of n .
- use the recursive formula to write a general expression for a_n in terms of a_{n-1} .

21. 1, 1, 2, 3, 5, 8, ...

22. 20, 17, 14, 11, 8, ...

23. 3, 7, 11, ...

24. A sequence is defined by $a_1 = 13$, $a_n = 5 + a_{n-1}$. Write the first five terms in the sequence.

25. **Make sense of problems.** Find the first term.

n	3	4	5	6
a_n	$\frac{7}{8}$	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{2}$

Aug 21-10:33 AM