

Bellwork:

What are the next three numbers:
4, 7, 12, 19, ...

Sep 3-7:21 AM

Chapter 12.1: Define & Use Sequence and Series

- A sequence is a function whose domain is a set of consecutive integers.

Domain:	1	2	3	4	5	6
Range:	a_1	a_2	a_3	a_4	a_5	a_6

Finite - has a ending point

Infinite - has no ending point

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ex. Find the first 6 terms of:

$$a_n = 2n + 5$$

$$f(n) = (-3)^{n-1}$$

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ex. Find the pattern and the rule:

a. -1, -8, -27, -64

b. 0, 2, 6, 12

c. 3, 8, 15, 24

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ex. You work in a grocery store and are stocking apples in the shape of a square pyramid with seven layers. Write a rule for the number of apples in each layer.

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Summation Notation

$$\sum_{i=0}^7 2i$$

$$\sum_{x=-5}^{\infty} 2x + 1$$

Sep 3-8:07 AM

ex. Write in summation notation:

a. $25+50+75+\dots+300$

b. $\frac{1}{2} + \frac{2}{3} + \frac{3}{4} + \frac{4}{5} + \dots$

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ex. Find the sum of the series

$$\sum_{k=4}^8 (3 + k^2)$$

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Formulas to know!!!!!!

$$\sum_{i=1}^n 1 = n \quad \sum_{i=1}^n i = \frac{n(n+1)}{2}$$

$$\sum_{i=1}^n i^2 = \frac{n(n+1)(2n+1)}{6}$$

Sep 3-10:08 AM

ex. How many apples are in the display of 7 layers of apples?

Sep 3-10:19 AM

Homework: Ch 12.1 pg.798
#4,8,12,16-22e,37-40,48,52,56,59

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