

CLO: Students will investigate SHIFTED GEOMETRIC sequences and define the END BEHAVIOR (LIMIT) for a recursive rule using extended recursive sequences

Warm - Up

Given the recursive formula, find the next five terms in the sequence

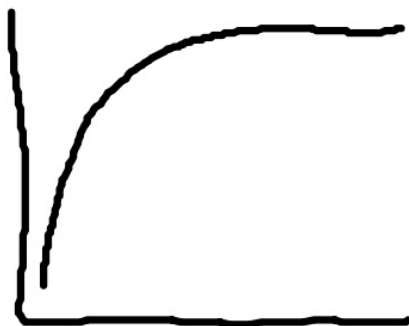


$$u_1 = 40$$

$$u_n = 0.5u_{n-1} - 2 \text{ where } n \geq 1$$

20, 10, 5, 2.5, 1.25

18, 7, 1.5, -1.25, -2.625



CLO: Students will investigate SHIFTED GEOMETRIC sequences and define the END BEHAVIOR(LIMIT) for a recursive rule using extended recursive sequences

Read through the investigation on page 45. You will not be performing the investigation, however all of the information you need to complete the table on the next slide will be provided in the reading.

You will work with your table partner to solve this problem and come up with your equation.

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Numbers of Days	Mg of medication no re-dose	Mg of medication with re-dose
0	16	16
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
RECURSIVE FORMULA		

CLO: Students will investigate SHIFTED GEOMETRIC sequences and define the END BEHAVIOR (LONG RUN VALUE / LIMIT) for a recursive rule using extended recursive sequences

Warm - Up

Antonio and Deanna are working at the community pool for the summer. They need to provide a "shock" treatment of 450 grams of dry chlorine to prevent the growth of algae in the pool, then they add 45 g of chlorine each day after the initial treatment. Each day the sun burns off 15% of the chlorine. Find the amount of chlorine after 1 day, 2 days and 3 days. What would be the long run value?

$$u_n = .85u_{n-1} + 45$$

$$u_n = (1 - .15)u_{n-1} + 45$$

long run = 300
34 days

$$u_0 = 450$$

$$u_1 = 427.5$$

$$u_2 = 408.4$$

$$u_3 = 392.1$$

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CLASSWORK

PAGE 48 - 49: 1, 5, 8

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