**Score:** 1 of 1 pt



## 11.1.7

Write the first five terms of the sequence whose general term, $a_n$, is given as $a_n = 5n + 7$.

$a_1 = 12$

$a_2 = 17$

$a_3 = 22$

$a_4 = 27$

$a_5 = 32$

**Score:** 1 of 1 pt



## 11.1.13

Write the first four terms of the sequence whose general term is given.

$$a_n = \frac{2n}{n+1}$$

$a_1 = 1$ (Simplify your answer.)

$a_2 = \frac{4}{3}$ (Simplify your answer.)

$a_3 = \frac{3}{2}$ (Simplify your answer.)

$a_4 = \frac{8}{5}$ (Simplify your answer.)

## 11.1.15

Write the first five terms of the sequence.

$a_n = (-1)^{n+4}$

$a_1 = -1$
(Simplify your answer. Type an integer or a fraction.)

$a_2 = 1$
(Simplify your answer. Type an integer or a fraction.)

$a_3 = -1$
(Simplify your answer. Type an integer or a fraction.)

$a_4 = 1$
(Simplify your answer. Type an integer or a fraction.)

$a_5 = -1$
(Simplify your answer. Type an integer or a fraction.)



## 11.1.22

Write the first four terms of the sequence whose general term is given below.

$$a_n = \frac{n^3}{(n-1)!}$$

$a_1 = 1$
(Type an integer or a simplified fraction.)

$a_2 = 8$
(Type an integer or a simplified fraction.)

$a_3 = \frac{27}{2}$
(Type an integer or a simplified fraction.)

$a_4 = \frac{32}{3}$
(Type an integer or a simplified fraction.)

**Score:** 0 of 1 pt

5 of 28

11.1.27

Predict the general term, or nth term, $a_n$, for the sequence.

4, 6, 8, 10, 12, ...

$a_n$ = 2n + 2

(Simplify your answer.)

**I put 2x+2 instead of 2n+2. DON'T MESS UP YOUR VARIABLES!**

**Score:** 1 of 1 pt

6 of 28

11.1.29

Predict the general term, or nth term, $a_n$, for the sequence.

$\frac{1}{5}, \frac{2}{6}, \frac{3}{7}, \frac{4}{8}, \frac{5}{9}, \cdots$

$a_n = \frac{n}{n+4}$

**Score:** 1 of 1 pt

7 of 28

**Test Score:** 92.86

11.1.31

Look at the pattern and then predict the general term, or nth term, $a_n$, of the sequence.

$-7, 7, -7, 7, \ldots$

Which is the general term, or nth term, $a_n$, of the sequence?

- A. $-7^n$
- B. $(-1)^n \cdot 7$
- C. $(-7)^n$
- D. $-1^n \cdot 7$

**Score:** 1 of 1 pt

8 of 28

11.1.35

Predict the general term, or nth term, $a_n$, of the sequence.

$1 \cdot 5, 2 \cdot 6, 3 \cdot 7, 4 \cdot 8, \ldots$

$a_n = n(n+4)$

**Score:** 1 of 1 pt

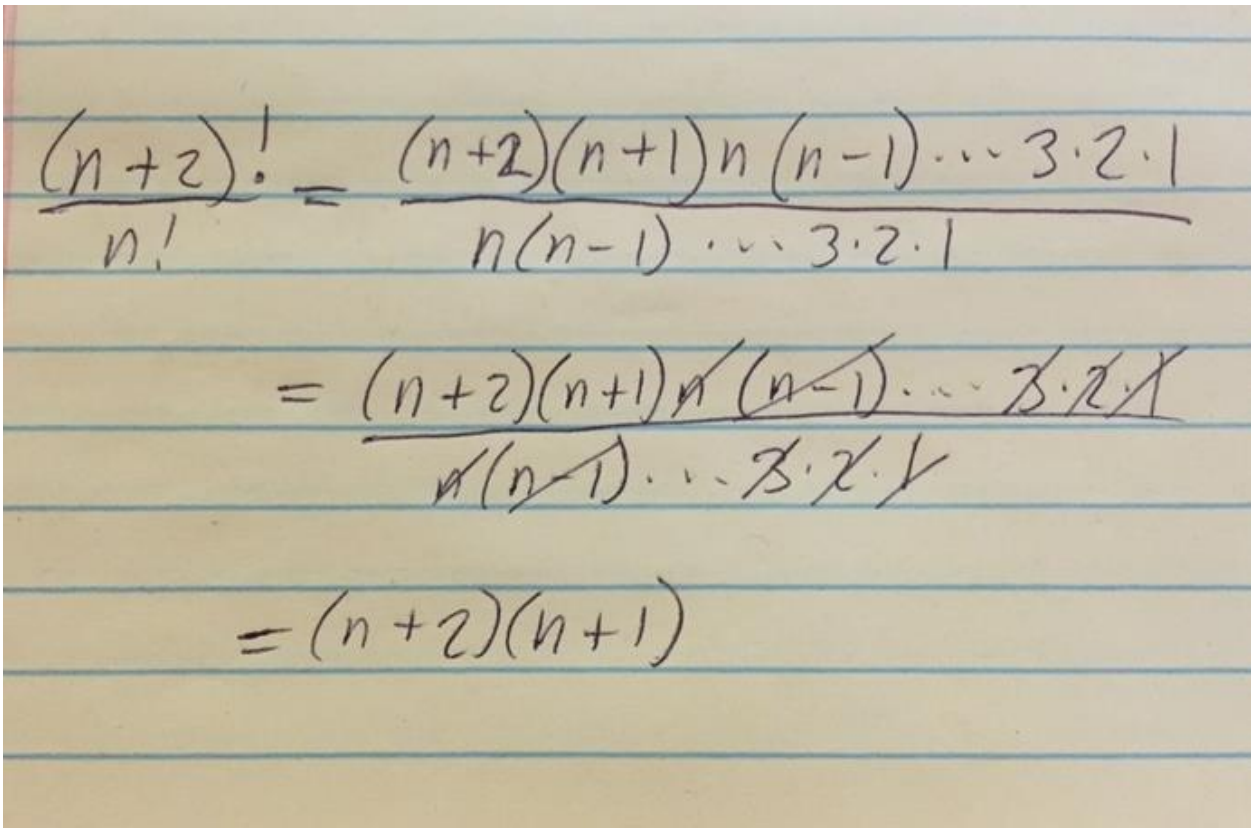
9 of 28

11.1.63

Evaluate the factorial expression.

$$\frac{(n+2)!}{n!}$$

$\frac{(n+2)!}{n!} = (n+2)(n+1)$ (Simplify your answer.)




**This is how to solve the previous equation. Because we don't know what n is, we have to assume that n(n-1) isn't the end of it. So we add the ...3*2*1 because we can't assume n-1 will equal 1, which would be the last whole number.**

**Score:** 1 of 1 pt

10 of 28

11.1.65

Find the sum of the series.

$$\sum_{i=1}^{12} 5$$

$$\sum_{i=1}^{12} 5 = 60$$

**Score:** 1 of 1 pt

11 of 28

11.1.67

Find the sum.

$$\sum_{j=5}^{10} j^3$$

$$\sum_{j=5}^{10} j^3 = 2925 \text{ (Simplify your answer.)}$$

**Bottom number is the starting point, top number is what you count to. NONE OF THEM ARE MULTIPLIERS. DO NOT TREAT THEM LIKE "!"**

**Score:** 1 of 1 pt

12 of 28

## 11.1.69

Evaluate the series.

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

$$\sum_{i=1}^{6} (2i+1) = 48$$

**Score:** 1 of 1 pt

13 of 28

**Test Score:** 92.86%,

## 11.1.83

Express the sum using summation notation.

$$\frac{3}{4}+\frac{4}{5}+\frac{5}{6}+\cdots+\frac{10}{11}$$

Which summation represents the sum?

A. $\sum_{k=1}^{7} \frac{3+k}{4+k}$

B. $\sum_{k=1}^{7} \frac{2+k}{3+k}$

C. $\sum_{k=1}^{8} \frac{3+k}{4+k}$

D. $\sum_{k=1}^{8} \frac{2+k}{3+k}$

**Score:** 1 of 1 pt

14 of 28

**Test Score:** 92

## 11.2.7

Determine whether the given sequence is arithmetic. If the given sequence is arithmetic, find the first term $a_1$ and the common difference d.

1, 5, 9, 13, 17, .....

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is arithmetic with first term 1 and common difference 4.
(Simplify your answer. Type an integer or a fraction.)

B. The sequence is not arithmetic.

**Score:** 1 of 1 pt | 15 of 28 | **Test Score:** 92

## 11.2.9

Determine whether the given sequence is arithmetic. If the given sequence is arithmetic, find the first term $a_1$ and the common difference d.

2, 4, 6, 8, 10, .....

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is arithmetic with first term 2 and common difference 2.
(Simplify your answer. Type an integer or a fraction.)

B. The sequence is not arithmetic.

**Score:** 1 of 1 pt | 16 of 28 | **Test Score**

## 11.2.17

Determine whether the given sequence is arithmetic. If the given sequence is arithmetic, find the first term $a_1$ and the common difference d.

$a_n = 6n + 1$

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is arithmetic with first term 7 and common difference 6.
(Simplify your answer. Type an integer or a fraction.)

B. The sequence is not arithmetic.

**Score:** 1 of 1 pt | 17 of 28

## 11.2.23

Write a formula for the nth term of the arithmetic sequence

$2, -2, -6, -10, -14, \ldots$

The formula for the nth term of the sequence is $a_n = -4n + 6$.

**Score:** 1 of 1 pt

18 of 28

11.2.37

Find the sum of the following arithmetic sequence.

$3 + 7 + 11 + 15 + \ldots + 63$

The sum of this series is 528. (Simplify your answer.)

**Score:** 1 of 1 pt

19 of 28

11.2.41

Find the sum of the following arithmetic sequence.

$5 + 9 + 13 + \cdots + 393$

$5 + 9 + 13 + \cdots + 393 =$ 19502 (Simplify your answer.)

**Score:** 0 of 1 pt

20 of 28

11.2.47

Find the sum of the first n terms of the given arithmetic sequence.

6, 13, 20, ...; n = 40

The sum of first n terms of the given arithmetic sequence 6, 13, 20, ... is 5,700.
(Simplify your answer.)

**For this, I put it in the equation solver. That is incorrect. To solve this, solve for a_n=6+(n-1)7. When simplified, we get a_n=7n-1. We know n=40, so plug in for this equation to get a_n (a_n is the last number in the sequence). This equals 279. So plug in for n((a_1+a_n)/2) to get 5,700.**

**Score:** 1 of 1 pt  21 of 28

11.3.7

Determine whether the following sequence is geometric. If it is, find the first term and the common ratio.

2, 8, 32, 128,....

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is geometric with the first term 2 and the common ratio 4.
(Simplify your answer.)

B. The sequence is not geometric.

**Score:** 1 of 1 pt  22 of 28

11.3.11

Determine whether the following sequence is geometric. If it is, find the first term and the common ratio.

1, −3, 9, −27, . . .

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is geometric with the first term 1 and the common ratio −3.
(Type an integer or a simplified fraction.)

B. The sequence is not geometric.

**Score:** 1 of 1 pt



## 11.3.15

Determine whether the following sequence is geometric. If it is, find the first term and the common ratio.

$$49,\ -7,\ 1,\ -\frac{1}{7},\ \ldots$$

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is geometric with the first term 49 and the common ratio $-\frac{1}{7}$.
(Type an integer or a simplified fraction.)

B. The sequence is not geometric.

**Score:** 1 of 1 pt



## 11.3.19

Determine whether the following sequence is geometric. If it is, find the first term and the common ratio.

$$a_n = 5^{n-1}$$

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

A. The sequence is geometric with the first term 1 and the common ratio 5.
(Type an integer or a simplified fraction.)

B. The sequence is not geometric.

**Score:** 1 of 1 pt



## 11.3.27

Find the first term $a_1$, the common ratio r, and the nth term $a_n$ for the following geometric sequence.

4, 20, 100, 500, . . .

The first term of the sequence is $a_1 = 4$.
(Type an integer or a simplified fraction.)

The common ratio of the sequence is $r = 5$.
(Type an integer or a simplified fraction.)

The nth term of the sequence is $a_n = 4(5)^{n-1}$.
(Simplify your answer. Use integers or fractions for any numbers in the expression.)

**Score:** 1 of 1 pt



**Test Score:** 92.86%, 26 of 28

## 11.3.35

Use the formula for the general term (the nth term) of a geometric sequence to find the indicated term of each sequence with the given first term, $a_1$, and common ratio, r.

Find $a_{11}$ when $a_1 = 7$, $r = 3$

$a_{11} = 413343$

11.3.37

Use the formula for the general term (the nth term) of a geometric sequence to find the indicated term of each sequence with the given first term, $a_1$, and common ratio, r.

Find $a_5$ when $a_1 = 3$, $r = -3$

$a_5 = 243$



11.3.57

Find the indicated sum. Use the formula for the sum of the first n terms of a geometric sequence.

$$\sum_{i=1}^{5} \left(\frac{1}{3}\right)^{i+1}$$

$$\sum_{i=1}^{5} \left(\frac{1}{3}\right)^{i+1} = \frac{121}{729}$$ (Type an integer or a simplified fraction.)