Sequences · Grade 11

Read each question carefully. They're not all the same kind of question.

Name _____ Date _____ Score _____ / 6

01 The second differences of 3, 6, 11, 18, … are constant. What are the next two terms?

Answer: _____

02 Which term of 4, 8, 16, … is 4096?

Answer: _____

03 Row 1 of a theatre has 20 seats, and each row has 3 more seats than the row before. How many seats are in row 11?

Answer: _____

04 How many terms are in the sequence 8, 16, 32, ..., 128?

Answer: _____

05 What is the general term of 96, 48, 24, 12, ...?

Answer: _____

06 A geometric sequence with positive terms has $t_2 = 18$ and $t_5 = 144$. What are a and r?

Answer: _____

Sequences · Grade 11 (Answer Key)

Read each question carefully. They're not all the same kind of question.

01 The second differences of 3, 6, 11, 18, … are constant. What are the next two terms?

27, 38

02 Which term of 4, 8, 16, … is 4096?

t_{11}

03 Row 1 of a theatre has 20 seats, and each row has 3 more seats than the row before. How many seats are in row 11?

50 seats

04 How many terms are in the sequence 8, 16, 32, ..., 128?

5 terms

05 What is the general term of 96, 48, 24, 12, ...?

$t_n = 96\left(\frac{1}{2}\right)^{n-1}$

06 A geometric sequence with positive terms has t_2 = 18 and t_5 = 144. What are a and r?

a = 9, r = 2