Section 3.3: Geometric Sequences and Series

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11:05 AM

examples:

		pattern?
①	7, 14, 28, 56, ... 114688	mult by 2
②	100, 20, 4, 4/5, ...	mult by 1/5
③	1/2, 1/4, 1/8, 1/16, ...	mult by 1/2
④	24, −16, 32/3, −64/9, ...	mult by −2/3

how do you find this?

take any term and divide by previous term

geometric sequence ≡ a sequence in which the next term is just the previous term multiplied by a constant

common ratio

r

recursive formula:

give a recursive formula for the sequence 100, 20, 4, 4/5, ...

geometric with $r = 1/5$

$$\begin{cases} a_1 = 100 \\ a_n = \frac{1}{5} a_{n-1} \end{cases}$$