Algebra 1 7.7

Identify and generate geometric sequences

Relate geometric sequences to exponential functions

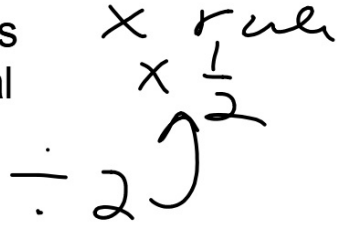
sequence

arithmetic sequence (3.5)

geometric sequence

common ratio

whiteboards



Quiz 7.7

3) 3, 6, 12, 24, 48...
first term: 3
common ratio (r): $\times 2$
look for patterns

$$y = (3)(2)^{n-1}$$

$$= 3(2)^{6}$$

$$= 192$$

Write the equation for the geometric sequence:

?

1 3 9 27 54...

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

?

100 50 25 12.5...

$y = (100)\left(\frac{1}{2}\right)^{n-1}$

?

2 3 4.5 6.75...

$y = (2)(1.5)^{n-1}$

What is the 27th term?

3 6 12 24 48...

$(3)(2)^{26}$

201,326,592