

Geometric sequences (Common ratio)

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Name: _____



Find the common ratio of each sequence:

a) 5, 15, 45, 135, 405...

3

e) 500, 10, 0.2, 0.004...

0.02

b) 1, 9, 81, 729, 6561...

9

f) 1, -6, 36, -216, 1296...

-6

c) 0.5, 3, 18, 108, 648...

6

g) -2, -8, -32, -128, -512...

4

d) 800, 320, 128, 51.2...

0.4

h) $2\sqrt{3}$, 6, $6\sqrt{3}$, 18, $18\sqrt{3}$...

$\sqrt{3}$

Find the term values using the 1st term (a) and common ratio (r) as shown:

If a = 4, and r = 2, find the

i) 2nd term

8

j) 8th term

512

If a = 1, and r = 6, find the

k) 3rd term

36

l) 5th term

1296

If a = 2, and r = 2.5, find the

m) 2nd term

5

n) 6th term

195.3125

If a = 3, and r = -2, find the

o) 2nd term

-6

p) 8th term

-384

If a = 400, and r = -0.8, find the

q) 3rd term

256

r) 5th term

163.84

If a = 5, and r = $\sqrt{2}$, find the

s) 3rd term

10

t) 7th term

135

Find the value of x in the geometric sequences below:

a) 4, 12, x ...

36

b) 4, x, 36 ...

12

c) x, x + 5, 20 ...

5

d) 4, x, 2x + 12 ...

-4 or 12

 Exam question:

What is the next number in this geometric sequence?

Leave your answer in exact form

$5\sqrt{2}, 20, 40\sqrt{2}, 160$

$320\sqrt{2}$

