Geometric sequences (Common ratio)

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Name:

Find the common ratio of each sequence:

a) 5, 15, 45, 135, 405…

b) 1, 9, 81, 729, 6561…

c) 0.5, 3, 18, 108, 648…

d) 800, 320, 128, 51.2…

e) 500, 10, 0.2, 0.004…

f) 1, -6, 36, -216, 1296…

g) -2, -8, -32, -128, -512…

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

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	j) 8th term
If a = 1, and r = 6, find the	k) 3rd term	l) 5th term
If a = 2, and r = 2.5, find the	m) 2nd term	n) 6th term
If a = 3, and r = -2, find the	o) 2nd term	p) 8th term
If a = 400, and r = -0.8, find the	q) 3rd term	r) 5th term
If a = 5, and r = $\sqrt{2}$, find the	s) 3rd term	t) 7th term

Find the value of x in the geometric sequences below:

a) 4 , 12 , x …

b) 4 , x , 36 …

c) x , $x+5$, 20 …

d) 4 , x , $2x+12$ …

Exam question:

What is the next number in this geometric sequence?

Leave your answer in exact form

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