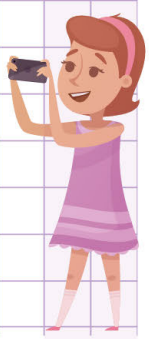
Name: ..... Class: .....

Complete a geometric number pattern

Complete the following geometric sequence.

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

b. 5, 20, 80, _____, 1,280



Solution

mathskills4kids

Name: ..... Class: .....

Complete a geometric number pattern

Complete the following geometric sequence.

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

Find the common ratio of all the terms

First term = 5

Common ratio (r) = t_2/t_1

t_2/t_1	t_3/t_2	t_4/t_3	t_5/t_4
$\frac{15}{5} = \frac{5x3}{1x5}$	$\frac{45}{15} = \frac{3x15}{1x15}$	$\frac{135}{45} = \frac{3x45}{1x45}$	$\frac{405}{135} = \frac{3x135}{1x135}$
= 3	= 3	= 3	= 3

Since the common ratio of all the terms is 3, it shows that each number is 3 times the previouse number

So, multiply 405 by 3 to find the first missing number

405 x 3 = 1,215

The last missing number is 1,215 x 3 = 3,645

Therefore, the missing numbers are 1,215 and 3,645

b. 5, 20, 80, _____, 1,280

Find the common ratio of all the terms

First term = 5

Common ratio (r) = t_2/t_1

t_2/t_1	t_3/t_2	t_4/t_3
$\frac{20}{5} = \frac{4x5}{1x5}$	$\frac{80}{20}$	$\frac{?}{80}$
= 4	= 4	= ?

Since the common ratio of all the terms is 4, it shows that each number is 4 times the previouse number

So, multiply 80 by 4 to find the missing number

80 x 4 = 320

Therefore, the missing term is 320