

Example:

x	Expanded	y
1	10	10
2	$10 \times \frac{1}{5}$	2
3	$10 \times \frac{1}{5} \times \frac{1}{5}$	$\frac{2}{5}$
4	$10 \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}$	$\frac{2}{125}$
5	$10 \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}$	$\frac{2}{125}$
6	$10 \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}$	$\frac{2}{625}$

Recursive:

$$f(n) = f(n-1) \times \frac{1}{5}$$

Start:

~~10~~
 $f(1) = 10$

Explicit:

$$y = 10\left(\frac{1}{5}\right)^{x-1}$$

Geometric