

Math worksheet on 'Patterning - Equation for Geometric Pattern (Level 1)'. Part of a broader unit on 'Patterns and Sums - Practice'

Learn online: app.mobius.academy/math/units/patterns and sums practice/

	1
_	ŀ
	Н
_	

Find the correct equation to describe this geometric pattern where n=1 is the first term

1, 2, 4, 8, 16, 32

$$egin{aligned} \mathbf{a}_n &= a_{n-2} + a_{n-1} \end{aligned} egin{aligned} \mathbf{b} & a_n &= 1 imes \mathbf{6}^{n-1} \ \mathbf{c}_{n-1} &= 1 - 2(n-1) \end{aligned} \mathbf{d} \quad a_n &= 1 imes 2^{n-1} \end{aligned}$$

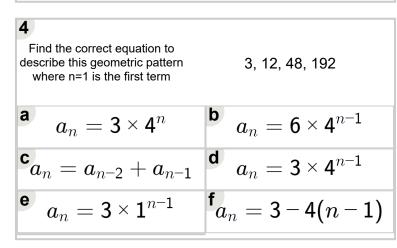
$$oxed{c} a_n = 1 - 2(n-1)$$

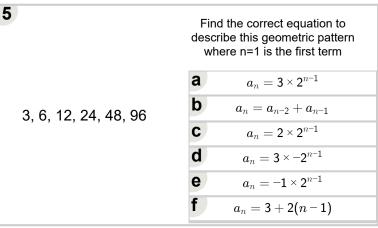
$$egin{aligned} \mathbf{e} & a_n = \mathbf{1} imes \mathbf{2}^n \end{aligned}$$

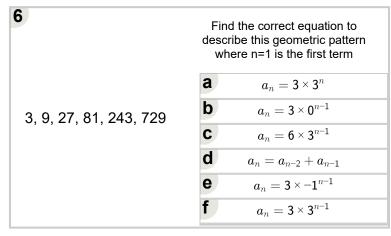
 $\boxed{^{\mathbf{f}} a_n = 1 \times -2^{n-1}}$ 

2	Find the correct equation to describe this geometric pattern where n=1 is the first term
	$a_n = 5 \times 3^{n-1}$
1, 3, 9, 27, 81, 243	$b \qquad \qquad a_n = 1 \times 3^{n-1}$
1, 0, 0, 21, 01, 210	$oldsymbol{c}$ $a_n=1 imes 3^n$
	<b>d</b> $a_n = 1 + 3(n-1)$
	$\mathbf{e} \qquad \qquad a_n = -2 \times 3^{n-1}$
	${\bf f} \qquad  a_n=a_{n-2}+a_{n-1}$

Find the correct equation to describe this geometric pattern where n=1 is the first term	
	$a_n = 2 \times 2^n$
2, 4, 8, 16, 32, 64	$\boldsymbol{b} \qquad  a_n = 2 \times 2^{n-1}$
	$\mathbf{C} \qquad a_n = 2 \times -2^{n-1}$
	$\mathbf{d} \qquad a_n = 2 - 2(n-1)$
	$\mathbf{e} \qquad a_n = a_{n-2} + a_{n-1}$
	$\mathbf{f} \qquad a_n = 2 + 2(n-1)$







Find the correct equation to describe this geometric pattern where n=1 is the first term	1, 5, 25, 125
$oxed{a}a_n=-3 imes 5^{n-1}$	$egin{array}{ccc} oldsymbol{b} & a_n = 1  imes 5^{n-1} \end{array}$
$oldsymbol{^{oldsymbol{c}}}a_n=a_{n-2}+a_{n-1}$	$egin{array}{ccc} oldsymbol{a}_n = 1  imes 5^n \end{array}$
$a_n=1+5(n-1)$	$\mathbf{f}a_n = 1 - 5(n-1)$