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

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1

Find the correct equation that this pattern rule describes

Start at 1 and multiply by 2 for each term

a $a_n = 1 - 2(n-1)$	**b** $a_n = 1 \times -1^{n-1}$
c $a_n = -3 \times 2^{n-1}$	**d** $a_n = 1 \times 2^{n-1}$
e $a_n = 1 \times 2^n$	**f** $a_n = 1 \times 1^{n-1}$

2

Find the correct equation that this pattern rule describes

Start at 3 and multiply by 5 for each term

a $a_n = 3 \times 5^n$	**b** $a_n = 1 \times 5^{n-1}$
c $a_n = 3 + 5(n-1)$	**d** $a_n = 3 \times 5^{n-1}$
e $a_n = a_{n-2} + a_{n-1}$	**f** $a_n = -1 \times 5^{n-1}$

3

Find the correct equation that this pattern rule describes

Start at 2 and multiply by 5 for each term

a $a_n = 2 \times 8^{n-1}$	**b** $a_n = 2 \times 5^{n-1}$
c $a_n = 5 \times 5^{n-1}$	**d** $a_n = 2 \times 1^{n-1}$
e $a_n = 2 \times 4^{n-1}$	**f** $a_n = 2 \times 5^n$

4

Find the correct equation that this pattern rule describes

Start at 3 and multiply by 4 for each term

a $a_n = 3 \times 4^n$	**b** $a_n = 3 \times 2^{n-1}$
c $a_n = 3 \times 3^{n-1}$	**d** $a_n = 3 \times 4^{n-1}$
e $a_n = 3 + 4(n-1)$	**f** $a_n = a_{n-2} + a_{n-1}$

5

Find the correct equation that this pattern rule describes

Start at 3 and multiply by 3 for each term

a $a_n = 3 \times 7^{n-1}$	**b** $a_n = 3 \times -1^{n-1}$
c $a_n = 3 \times 3^n$	**d** $a_n = 3 \times 3^{n-1}$
e $a_n = 3 + 3(n-1)$	**f** $a_n = -1 \times 3^{n-1}$

6

Find the correct equation that this pattern rule describes

Start at 1 and multiply by 4 for each term

a $a_n = a_{n-2} + a_{n-1}$	**b** $a_n = 1 \times 1^{n-1}$
c $a_n = -1 \times 4^{n-1}$	**d** $a_n = 1 \times 4^n$
e $a_n = 1 \times 4^{n-1}$	**f** $a_n = 1 \times 6^{n-1}$

7

Find the correct equation that this pattern rule describes

Start at 2 and multiply by 3 for each term

a $a_n = 2 + 3(n-1)$	**b** $a_n = 2 \times 3^{n-1}$
c $a_n = 5 \times 3^{n-1}$	**d** $a_n = 2 - 3(n-1)$
e $a_n = 2 \times 3^n$	**f** $a_n = a_{n-2} + a_{n-1}$