



## Patterning - First Values from Equation for Geometric Pattern

**1** Choose the first values that this equation would create starting with  $n=1$

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

A 2, 4, 6, 8, 10, 12

B 2, 10, 50, 250, 1,250, 6,250

C 2, 2, 2, 2, 2, 2

D 2, 4, 8, 16, 32, 64

E 6, 12, 24, 48, 96, 192

F 2, 0, -2, -4, -6, -8

**2** Choose the first values that this equation would create starting with  $n=1$

$$a_n = 2 \times 5^{n-1}$$

A 2, 10, 50, 250

B 2, 7, 9, 16

C -2, -10, -50, -250

D 2, 8, 32, 128

E 2, -3, -8, -13

F 2, 18, 162, 1,458

**3** Choose the first values that this equation would create starting with  $n=1$

$$a_n = 3 \times 5^{n-1}$$

A 1, 5, 25, 125

B 3, 8, 13, 18

C 3, 15, 75, 375

D 3, -2, -7, -12

E 6, 30, 150, 750

F 3, 3, 3, 3

**4** Choose the first values that this equation would create starting with  $n=1$

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

A 1, 2, 4, 8, 16, 32

B 0, 0, 0, 0, 0, 0

C 1, -1, -3, -5, -7, -9

D 1, 3, 5, 7, 9, 11

E 1, 6, 36, 216, 1,296, 7,776

F 1, -2, 4, -8, 16, -32

**5** Choose the first values that this equation would create starting with  $n=1$

$$a_n = 3 \times 3^{n-1}$$

A 3, 18, 108, 648, 3,888, 23,328

B 3, 0, -3, -6, -9, -12

C 3, 12, 48, 192, 768, 3,072

D 3, 6, 9, 12, 15, 18

E 3, 9, 27, 81, 243, 729

F 3, 0, 0, 0, 0, 0

**6** Choose the first values that this equation would create starting with  $n=1$

$$a_n = 1 \times 3^{n-1}$$

A 1, 4, 7, 10, 13, 16

B 1, 3, 9, 27, 81, 243

C -2, -6, -18, -54, -162, -486

D 1, -2, -5, -8, -11, -14

E 1, 4, 5, 9, 14, 23

F 4, 12, 36, 108, 324, 972

**7** Choose the first values that this equation would create starting with  $n=1$

$$a_n = 3 \times 2^{n-1}$$

A 3, 5, 8, 13, 21, 34

B 3, 6, 12, 24, 48, 96

C 3, 1, -1, -3, -5, -7

D 6, 12, 24, 48, 96, 192

E 3, 5, 7, 9, 11, 13

F 3, 0, 0, 0, 0, 0

**8** Choose the first values that this equation would create starting with  $n=1$

$$a_n = 1 \times 4^{n-1}$$

A 1, 5, 9, 13

B 1, 5, 6, 11

C 1, -3, -7, -11

D 1, 2, 4, 8

E -3, -12, -48, -192

F 1, 4, 16, 64