1. Which recursive sequence would produce the sequence $1, -3, 17, ...$?

A. $a_1 = 1$ and $a_n = 3a_{n-1} - 6$

B. $a_1 = 1$ and $a_n = -5a_{n-1} + 2$

C. $a_1 = 1$ and $a_n = 2a_{n-1} - 5$

D. $a_1 = 1$ and $a_n = -6a_{n-1} + 3$

2. Which recursive sequence would produce the sequence $3, -16, 79, ...$?

A. $a_1 = 3$ and $a_n = 2a_{n-1} - 6$

B. $a_1 = 3$ and $a_n = -5a_{n-1} - 1$

C. $a_1 = 3$ and $a_n = -a_{n-1} - 5$

D. $a_1 = 3$ and $a_n = -6a_{n-1} + 2$

3. Which recursive sequence would produce the sequence $3, 11, 27, ...$?

A. $a_1 = 3$ and $a_n = 2a_{n-1} + 3$

B. $a_1 = 3$ and $a_n = 2a_{n-1} + 5$

C. $a_1 = 3$ and $a_n = 3a_{n-1} + 2$

D. $a_1 = 3$ and $a_n = 5a_{n-1} + 2$

4. Which recursive sequence would produce the sequence $10, -15, 10, ...$?

A. $a_1 = 10$ and $a_n = -5a_{n-1} - 1$

B. $a_1 = 10$ and $a_n = -2a_{n-1} + 5$

C. $a_1 = 10$ and $a_n = 5a_{n-1} - 2$

D. $a_1 = 10$ and $a_n = -a_{n-1} - 5$

5. Which recursive sequence would produce the sequence $7, -33, 127, ...$?

A. $a_1 = 7$ and $a_n = -4a_{n-1} - 5$

B. $a_1 = 7$ and $a_n = -5a_{n-1} - 4$

C. $a_1 = 7$ and $a_n = -5a_{n-1} + 2$

D. $a_1 = 7$ and $a_n = 2a_{n-1} - 5$

6. What is a formula for the nth term of the given sequence?

$$-6, 0, 6...$$

A. $a_n = -6(6)^n$

B. $a_n = -6 + 6(n + 1)$

C. $a_n = -12 + 6n$

D. $a_n = -6 + 6n$

7. What is a formula for the nth term of the given sequence?

$$8, 16, 32...$$

A. $a_n = 8(\frac{1}{2})^{1-n}$

B. $a_n = 8(\frac{1}{2})^n$

C. $a_n = 8(\frac{1}{2})^{-n}$

D. $a_n = 8(2)^{1-n}$

8. What is a formula for the nth term of the given sequence?

$$250, 100, 40...$$

A. $a_n = 625(\frac{2}{5})^{-n}$

B. $a_n = 625(\frac{2}{5})^n$

C. $a_n = 250(\frac{2}{5})^n$

D. $a_n = 250(\frac{5}{2})^{-n}$

9. What is a formula for the nth term of the given sequence?

$$12, 6, 3...$$

A. $a_n = 24(2)^{1-n}$

B. $a_n = 24(\frac{1}{2})^{n-1}$

C. $a_n = 24(\frac{1}{2})^{-n}$

D. $a_n = 12(2)^{1-n}$

10. What is a formula for the nth term of the given sequence?

$$12, 20, 28...$$

A. $a_n = 20 + 8(n - 1)$

B. $a_n = 12 + 8(n + 1)$

C. $a_n = -4 + 8(n + 1)$

D. $a_n = 12(8)^n$