1. Which recursive sequence would produce the sequence $1, 0, -5, \dots$?

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

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

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

D. $a_1 = 1$ and $a_n = -4a_{n-1} + 4$

2. Which recursive sequence would produce the sequence $7, -18, 32, \dots$?

A. $a_1 = 7$ and $a_n = -2a_{n-1} - 4$

B. $a_1 = 7$ and $a_n = 3a_{n-1} - 3$

C. $a_1 = 7$ and $a_n = -4a_{n-1} - 2$

D. $a_1 = 7$ and $a_n = -3a_{n-1} + 3$

3. Which recursive sequence would produce the sequence $5, 22, 107, \dots$?

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

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

C. $a_1 = 5$ and $a_n = 4a_{n-1} + 2$

D. $a_1 = 5$ and $a_n = 2a_{n-1} + 4$

4. Which recursive sequence would produce the sequence $2, -5, 30, \dots$?

A. $a_1 = 2$ and $a_n = 3a_{n-1} - 4$

B. $a_1 = 2$ and $a_n = -4a_{n-1} + 3$

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

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

5. Which recursive sequence would produce the sequence $9, 31, 119, \dots$?

A. $a_1 = 9$ and $a_n = -5a_{n-1} + 4$

B. $a_1 = 9$ and $a_n = 4a_{n-1} - 5$

C. $a_1 = 9$ and $a_n = 3a_{n-1} + 4$

D. $a_1 = 9$ and $a_n = 4a_{n-1} + 3$

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

$$7, 14, 21\dots$$

A. $a_n = 7 - 7(n - 1)$

B. $a_n = 7 + 7(n + 1)$

C. $a_n = -7 + 7(n + 1)$

D. $a_n = 7 + 7n$

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

$$-4, -9, -14\dots$$

A. $a_n = -4 + 5(n - 1)$

B. $a_n = -4(-5)^{n-1}$

C. $a_n = 1 - 5n$

D. $a_n = -9 + 5n$

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

$$1, 9, 17...$$

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

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

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

D. $a_n = 1 + 8n$

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

$$54, -36, 24...$$

A. $a_n = -81(-\frac{3}{2})^{n-1}$

B. $a_n = -81(-\frac{2}{3})^{-n}$

C. $a_n = -81(-\frac{2}{3})^{n}$

D. $a_n = -81(-\frac{2}{3})^{n-1}$

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

$$-3, -8, -13...$$

A. $a_n = -3 - 5(n+1)$

B. $a_n = -8 + 5n$

C. $a_n = -3 - 5n$

D. $a_n = 7 - 5(n+1)$