

Unit 2 Assessment • Reasoning with Linear Equations and Inequalities

1. Randy and Jake each have a collection of soccer trophies. Jake has 13 fewer than twice as many soccer trophies as Randy. When they combine their collections, there are 35 trophies in all. How many soccer trophies are in Jake's collection?

A. 11
B. 16
C. 19
D. 24

2. The recursive formula of an arithmetic sequence is described below.

$$a_1 = 19, a_n = a_{n-1} + 6$$

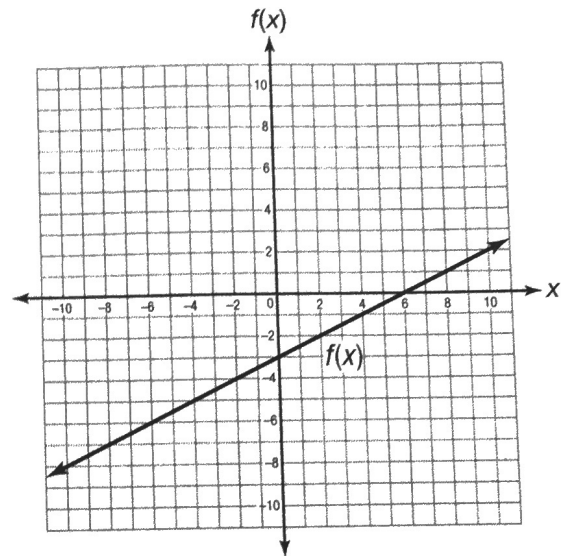
Which represents the explicit equation of this arithmetic sequence?

A. $a_n = 6n + 13$
B. $a_n = 6n + 19$
C. $a_n = 13n + 6$
D. $a_n = 19n + 6$

3. Renting a canoe costs an initial \$10 fee plus an additional \$8 for each hour the canoe is rented. If c represents the cost of a canoe rental and t represents the number of hours of the rental, which of the following equations best models this scenario?

A. $c = 8t + 10$
B. $c = 10t + 8$
C. $t = 8c + 10$
D. $t = 10c + 8$

4. Which ordered pair represents a solution to the function graphed below?



A. (6, 0) C. (4, 1)
B. (-2, 2) D. (2, -3)

5. Dylan is preparing to try out for the boys' golf team. During his first day of practice, Dylan hit 45 golf balls at the driving range. Each subsequent day, Dylan hits 13 more golf balls than he hit during the previous day. If a_n represents the number of golf balls that Dylan hits on the n th day of practice, which of the following describes the recursive formula for the sequence represented by the number of golf balls that Dylan hits each day?

A. $a_1 = 13, a_n = a_{n-1} + 13$
B. $a_1 = 45, a_n = a_{n-1} + 13$
C. $a_1 = 13, a_n = a_{n-1} + 45$
D. $a_1 = 45, a_n = a_{n-1} + 45$