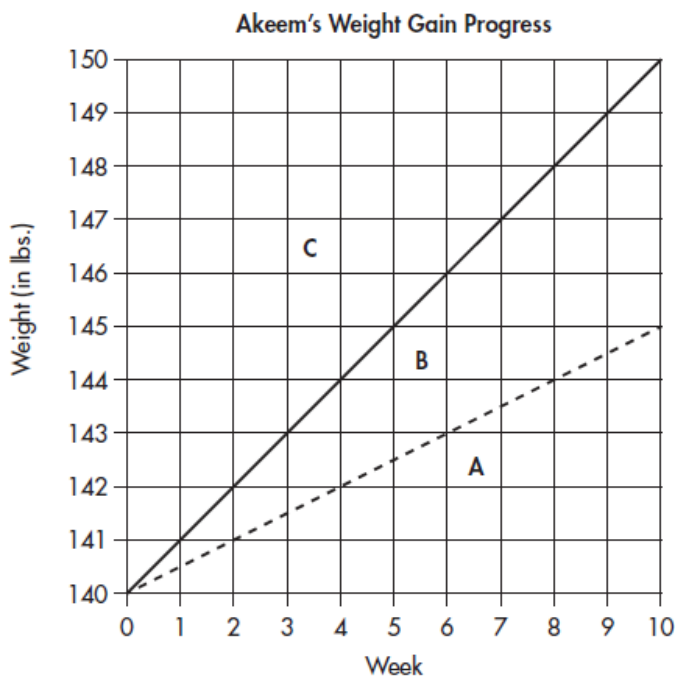


- 1** Sandi and Felipe are participating in a Walk for Life to raise money for charity. Sandi will raise \$30, plus \$2.50 for each mile she walks. Felipe will raise \$20, plus \$5 for each mile he walks. The total amount that each will raise can be calculated using the following expressions, where n stands for the number of miles walked:

$$\text{Sandi: } 30 + 2.5n \qquad \text{Felipe: } 20 + 5n$$

After how many miles will Sandi and Felipe have raised the same amount of money?

- 2** Akeem weighs 140 pounds(lbs) and hopes to add weight in order to play football in the fall. He hopes to gain between 0.5 and 1.0 pound (lb) per week over the next 10 weeks. Akeem will record his progress on the graph below. On the graph, the solid line represents a weight-gain rate of exactly 1.0 pound per week. The dotted line represents a weight-gain rate of exactly 0.5 pound per week.



If Akeem gains more than 1 pound per week, which region on the graph will contain all possible points that could represent Akeem's weight-gain progress?

- (F) region A
(G) region B
(H) region C
(I) regions B and C combined

Answers

1 (B)

To find the correct number of miles, n , solve the equation $30 + 2.5n = 20 + 5n$. Subtract $2.5n$ from each side to get $30 = 20 + 2.5n$. Now subtract 20 from each side to get $10 = 2.5n$. Then $n = \frac{10}{2.5} = 4$.

2 (H)

Region C represents all points greater than 1 pound per week.