1

$f(x) = 3x^2 + 4x - c$

In the given quadratic function f, c is a constant and $f(2) = 12$. What is the value of c?

A) 8

B) 30

C) 32

D) 468

2

$11.5X+3.5Y=265$

A person used a total of 265 kilocalories (kcal) while walking and running on a treadmill. Running at a constant rate required 11.5 kcal per minute, and walking at a constant rate required 3.5 kcal per minute. The relationship between the number of minutes running, x, and the number of minutes walking, y, is given by the equation shown. If this person ran for 20 minutes, how many minutes did this person walk?

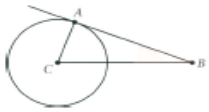
A) 35

B) 29

C) 17

D) 10

3



In the figure shown, C is the center of the circle and $\overline{AB}$ is tangent to the circle at A. Which of the following is true about the measure of angle BAC?

A) The measure is less than 90°.

B) The measure is greater than 90°.

C) The measure is equal to 90°.

D) It cannot be determined whether the measure is less than, greater than, or equal to 90°.

4

$$\frac{\left(\frac{6}{x}\right)}{18}$$

Which of the following is equivalent to the given expression?

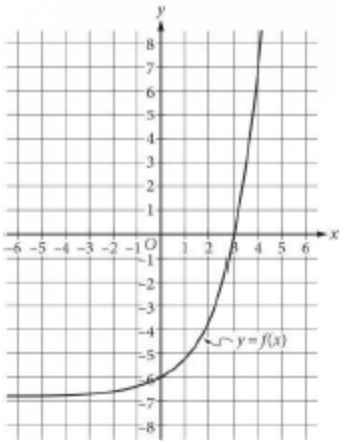
A) $\frac{3}{x}$

B) $\frac{1}{3x}$

C) $\frac{108}{x}$

D) $\frac{x}{12}$

5



The graph of the function f is shown. What is the value of x for $f(x)=0$?

A) -6

B) -3

C) 0

D) 3

6

$A=P(rt+1)$

The equation shown gives A in terms of P, r, and t, where P and r are not equal to 0. Which equation gives t in terms of A, P, and r ?

A) $t=\frac{A}{P}-\frac{1}{r}$

B) $t=\frac{A}{Pr}-\frac{1}{Pr}$

C) $t=\frac{A}{Pr}-\frac{1}{r}$

D) $t=\frac{A}{r}-\frac{P}{r}$

7

$nx+3y=1$
$12x-6y=0$

In the system of equations above, n is a constant. If the system has no solution, what is the value of n?

A) -9

B) -6

C) 3

D) 6