

QUESTION 18

Which of the following is a correct statement about the relationship between the two functions shown below?

The graph shows two parabolas on a coordinate plane. The x-axis and y-axis both range from -10 to 10. The parabola $f(x) = 2x^2 - 4x + 3$ has its vertex at $(1, 1)$ and passes through the points $(0, 3)$ and $(2, 3)$. The parabola $g(x) = 2x^2 - 4x + 1$ has its vertex at $(1, -1)$ and passes through the points $(0, 1)$ and $(2, 1)$. The two parabolas are vertically separated, with $f(x)$ always above $g(x)$.

ANSWER CHOICES

- A. $f(x)$ is always greater than $g(x)$.
- B. $f(x)$ is always less than $g(x)$.
- C. $f(x)$ and $g(x)$ are always equal.
- D. $f(x)$ and $g(x)$ are never equal.

ANSWER

A. $f(x)$ is always greater than $g(x)$.