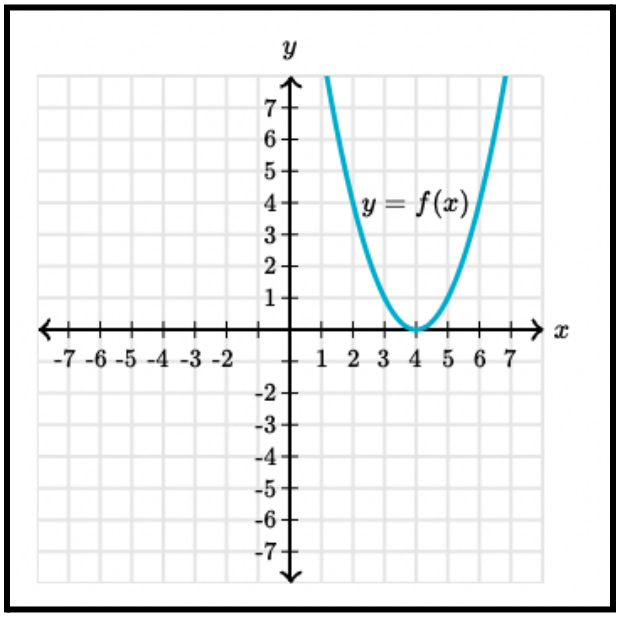
Topic: Number of solutions of quadratic equations

Problem:

Is the discriminant of *f* positive, zero, or negative?



(insert above image)

Choose 1 answer:

A. Positive
B. Zero
C. Negative

Answer:

Zero

Hints (2 Total):

Hint 1 / 2

The discriminant is a part of the quadratic formula. The sign of the discriminant tells us whether there are two roots, one root, or no roots.
(insert below image)

$$\frac{-b \pm \sqrt{\overbrace{b^2 - 4ac}^{\text{discriminant}}}}{2a}$$

Discriminant	Roots
Positive	Two real roots
Zero	One repeated real root
Negative	No real root

Hint 2 / 2

In this case, the parabola touches the x-axis only once, so f has a real number root. Therefore, the discriminant of f is equal to 0.