Answer on Question #48399-Engineering-Other

If the roots of the polynomial $p(x) = x^2 - bx + c$ be two consecutive integers then $b^2 - 4c$ equals.

Solution

We have an equation

$$x^2 - bx + c = 0.$$
$$D = b^2 - 4c.$$

Also, the difference between the roots is

 $x_2 - x_1 = \sqrt{D}.$

But
$$x_1$$
 and x_2 are two consecutive integers:

$$x_2 - x_1 = \sqrt{D} = 1.$$

So,

$$b^2 - 4c = 1.$$

Answer: 1.

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