

# QUADRATIC EQUATIONS

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## 10<sup>th</sup> Maths - Chapter 4

This is Problem-2.2 from Exercise 4.1

1. Represent the following situations in the form of quadratic equations : (ii)  
The product of two consecutive positive integers is 306. We need to find the integers.

**Solution: :**

Required quadratic equation is :

$$x^2 + x - 306 = 0 \quad (1)$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (2)$$

$$x = \frac{-1 \pm \sqrt{1^2 - (4)(1)(-306)}}{(2)(1)} \quad (3)$$

$$x = \frac{-1 \pm \sqrt{1 + 1224}}{2} \quad (4)$$

$$x = \frac{-1 \pm 35}{2} \quad (5)$$

$$x_1 = \frac{34}{2} \quad (6)$$

$$x_2 = \frac{-36}{2} \quad (7)$$

$$x_1 = 17 \quad (8)$$

$$x_2 = 18 \quad (9)$$

$$(10)$$

since the two integers are 17 and 18