## Ncert Solutions Chapter 4 Quadratic Equations Exercise 4.2 Question 3

**Question 3**. Find two numbers whose sum is 27 and product is 182.

## **Solution**:

Let first number be *x* 

Let second number be (27-x)

According to given condition, the product of two numbers is 182

Therefore, we can write x(27-x)=182

$$\Rightarrow 27x - x^2 = 182$$

$$\Rightarrow x^2 - 27x + 182 = 0$$

$$\Rightarrow x^2 - 14x - 13x + 182 = 0$$

$$\Rightarrow x(x-14)-13(x-14)=0$$

$$\Rightarrow$$
  $(x-14)(x-13) = 0$ 

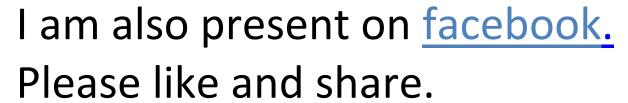
$$\Rightarrow x = 14,13$$

Therefore, the first number is equal to 14 or 13

And, second number is = 27 - x = 27 - 14 = 13

or Second number = 27 - 13 = 27 - 13 = 14

Therefore two numbers are 13 and 14.



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