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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