## 4 . SECOND DEGREE EQUATIONS - CLASS - 6 - WORKSHEET

Important points

➤ Any second degree polynomial can be put in the form $p(x) = ax^2 + bx + c$

➤ To get $ax^2 + bx + c = 0$, we must take $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

1. a) Find the sum $1 + 2 + 3 + \ldots + 10$.

   b) How many consecutive natural numbers starting from 1 should be added to get 120 ?

2) A rectangle is to be made on the ground using a 50 metres long rope .The area enclosed

   must be 154 square metres .

   a) What is the perimeter of the rectangle ?

   b) What is the sum of the lengths of a smaller side and a larger side of the rectangle ?

   c) What are the lengths of the sides of the rectangle ?

3.The perimeter of a right triangle is 30 centimetres and its hypotenuse is 13 centimetres

   a) What is the sum of the lengths of the perpendicular sides of the triangle ?

   b) What are the lengths of the perpendicular sides of the triangle ?

4. In writing the equation to construct a rectangle of specified perimeter and area , the

   perimeter was wrongly written as 26 instead of 62 . The length of a side was found

   to be 10 .

   a) What is the area in the problem ?

   b) What are the lengths of the sides of the rectangle in the correct problem ?

5.
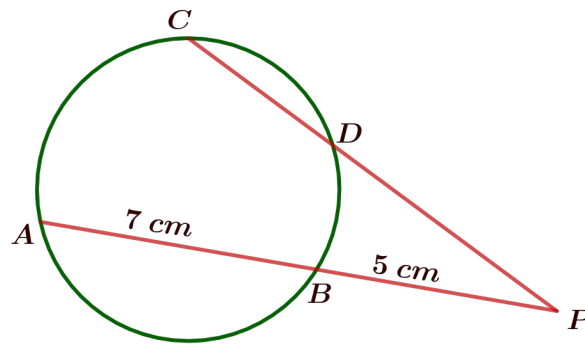
In the figure two chords AB , CD of the circle are extended to meet at P .

AB = 7 centimetres   , PB = 5 centimetres . The length of CD is 2 centimetres less than

that of PD .

 a) What is the length of the line PA ?

 b) Fill in the blank .

   $PC \times PD = PA \times ----$

 c) What is the length of the chord CD   ?

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