WANDOOR GANITHAM - S S L C UNIT TEST 2021

3.04AE   **SECOND DEGREE EQUATIONS**   Total Score : 20
                                                       Time : 40 minutes

1. a) Which number is to be added to $x^2 + 12x$ to get a perfect square ?

   b) Find the natural number value of x from the equation $x^2 + 12x = 64$?   (3)

2. 1 added to the product of two consecutive odd numbers gives 256 .

   a) Write down a second degree equation by taking the smaller number as x

   b) What are the numbers ?   (3)

3. When each side of a square was increased by 3 metres , the area became 400 square -

   metres .

   a) Write down a second degree equation by taking the side of the original square as x

   b) What was the length of a side of the original square ?   (3)

4. 9 added to the product of two consecutive multiples of 6 gives 225 .

   a) Write down a second degree equation by taking the smaller multiple as x

   b) What are the numbers ?   (3)

5. The longer side of a rectangle is 4 centimetres more than its shorter side . The area of

   the rectangle is 320 square centimetres .

   a) Write down a second degree equation by taking the shorter side as x

   b) What are the lengths of its the sides ?   (4)

6. The perimeter of a rectangle is 40 centimetres and its area is 96 square centimetres .

   a) What is the sum of the lengths of the longer and the shorter sides of the rectangle ?

   b)Write down a second degree equation by taking the length of the longer side as $10 + x$

   c) What are the lengths of its the sides ?   (4)