The CitySchool
North Nazimabad Boys Campus

**Date: 11-02-2017**

**Class: 9-S
Subject: Maths
Teacher: Sheema Aftab**

 **Topic : Quadratic Word Problems**

**1**Determine the quadratic equation whose solutions are: 3 and −2.

**2** FindFactor of: 

**3**Determine the value of k so that the two roots of the equation x2 − kx + 36 = 0 are equal.

**4**The sum of two numbers is 5 and their product is −84. Find these numbers.

**5**Within 11 years, the age of Peter will be half the square of the age he was 13 years ago. Calculate the current age of Peter.

**6**To fence a rectangular farm of 750 m², 110 m of fence has been used. Calculate the dimensions of the farm.

**7**The three sides of a right-angled triangle are proportional to the numbers 3, 4 and 5. Find the length of each side knowing that the area of the triangle is 24 m².

**8**A rectangular garden 50 m long and 34 m wide is surrounded by a uniform dirt road. Find the width of the road if the total area of the garden and road is 540 m².

**9**Calculate the dimensions of a rectangle whose diagonal is 75 m, knowing that is similar to a rectangle with sides measuring 36 m 48 m respectively.

**10**Find an integer number where the sum with its inverse is .

**11**Two natural numbers differ by two units and the sum of their squares is 580. What are these numbers?

**12**Two taps A and B fill a swimming pool together in two hours. Alone, it takes tap A three hours less than B to fill the same pool. How many hours does it take each tap to fill the pool separately?

**13**The length of the sides of a right-angled triangle are measured as three consecutive even numbers (in cm). Find the values of these sides.

**14**A rectangular piece of cardboard is 4 cm longer than wide. A box of 840 cm³ is constructed by using this piece of cardboard. A square of 6 cm is cut out in every corner and the rims are folded upwards to create the box. Find the dimensions of the box.

**15**2 faucets can fill a tank in 1 hour and 20 minutes. The first faucet takes more than two hours longer to fill the same tank when functioning without the second tap. How long does it take to fill each one separately?