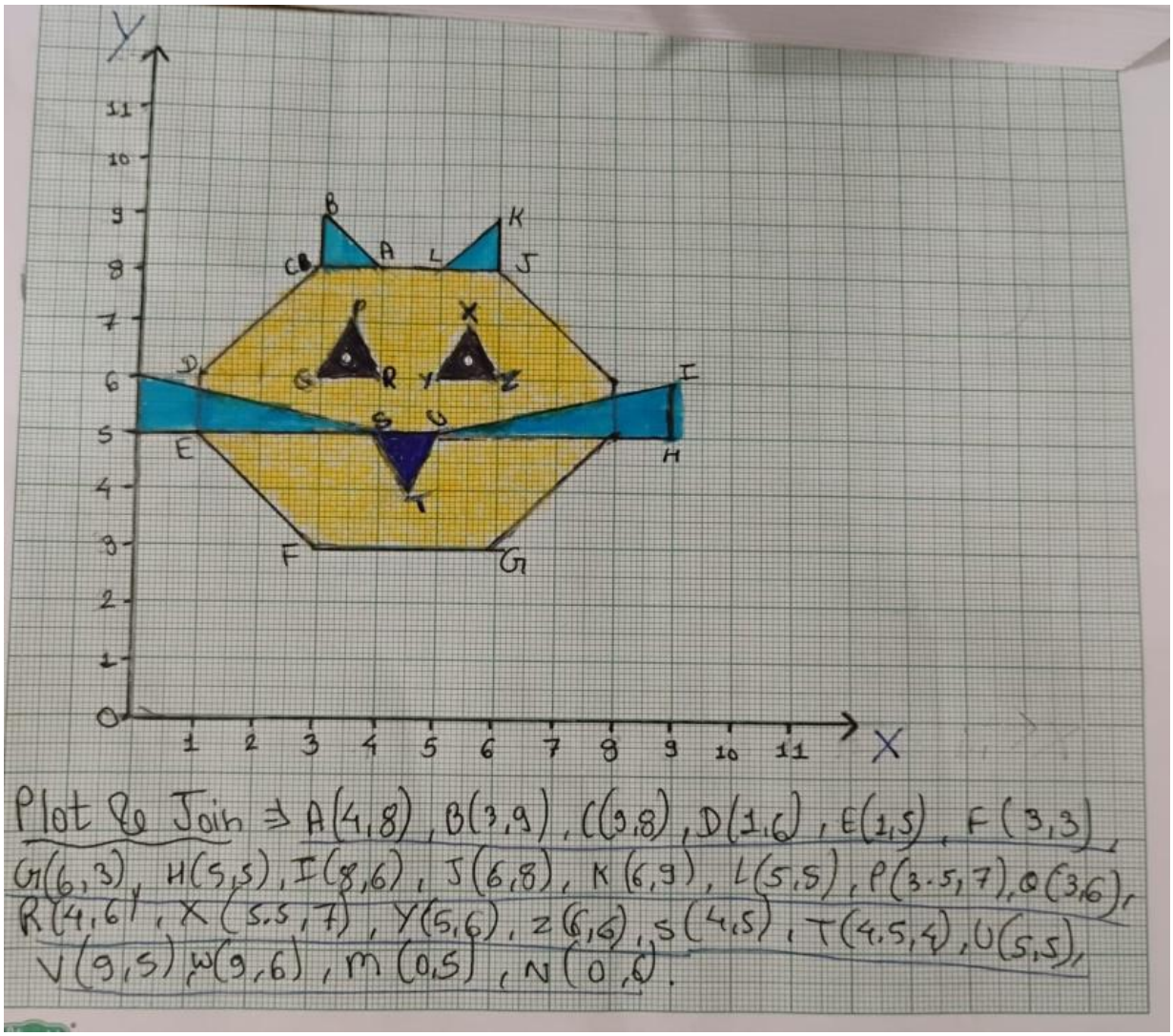
SUMMER ASSIGNMENT

SUB: MATHEMATICS-CLASS: X

1. Find LCM and HCF of 84 and 144 by prime factorization method and verify that product of LCM and HCF is equal to the product of numbers.
2. Find HCF of 96 and 404 by prime factorization and hence find their LCM.
3. Find the smallest number of 5 digits which isdivisible by 24, 60 and 90.
4. Three bells ring at an interval of 6 minutes, 8 minutes and 12minutes respectively. If they ring together, then find the minimum time after which they will ring again simultaneously.
5. Two numbers are in the ratio 2:3 and their LCMis 180. Find the HCF of the numbers.
6. Dudhnath has two vessels containing 750 ml and 405 ml of milk. Milk from these containers is poured into glasses of equal capacity to their brim. Find the minimum number of glasses that can be filled.
7. Prove that $\sqrt{2}$ is an irrational number.
8. Find the zeroes of $p(x) = 6x^2 - 7x - 3$ and verify the relationship between zeroes and coefficients.
9. If sum of the squares of zeroes of $p(x) = x^2 - 8x + k$ is 40, then find the value of k.
10. If zeroes of the polynomial $ax^2 + bx + c$ are in the ratio 4 : 5, prove that $20b^2 = 81ac$.
11. Plot the points on the graph and sketch the diagram.



Write following maths activities in your practical file:

1. To obtain conditions of solutions of a pair of linear equations.
2. Sum of n odd natural numbers: 1 +3 +5 + ... To n terms = n^2
3. To find the sum of n terms of an A.P whose first term is a and common difference is d.
4. To find the sum of n natural numbers: 1 + 2 + 3 + 4 + ...+ n = $\frac{n(n+1)}{2}$
5. To verify Basic Proportionality Theorem
6. To find centroid of a triangle by activity.
7. To verify Pythagoras Theorem