HAPPY HOLIDAYS

CLASS X **HOLIDAYS HOME WORK FOR SUMMER VACATION** **SUB : MATHS**

Q1. EXPLAIN GRAPHICALLY WITH THE HELP OF 5 EXAMPLES ON EACH OF THE FOLLOWING CONCEPT ON LINEAR EQUATIONS IN TWO VARIABLES

- IF $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}, then\ the\ lines\ intersect\ each\ other.$
- IF $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}, then\ the\ lines\ do\ not\ intersect\ each\ other.$
- IF $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}, then\ the\ lines\ are\ coincident\ lines\ .$

Q2. DRAW THE GRAPH OF FOLLOWING EQUATIONS ON GRAPH PAPER

- $x = 0.$
- $y = 0.$
- $x = 1.$
- $x = y.$
- $x + y = 0.$
- $y - 5 = 0.$
- $2x + 3y = 5.$

Q3. SOLVE 10 EXAMPLES OF FINDING THE L.C.M AND H.C.F. OF THREE DIFFERENT NUMBERS AND VERIFY THE FOLLOWING RESULTS:

- L.C.M (P,Q,R) × H.C.F (P,Q,R) ≠ P×Q×R
- L.C.M (P,Q,R) $= \frac{P \times Q \times R \quad HCF(P,Q,R)}{HCF(P,Q) \times HCF(R,Q) \times HCF(P,R)}$
- H.C.F (P,Q,R) $= \frac{P \times Q \times R \quad LCM(P,Q,R)}{LCM(P,Q) \times LCM(R,Q) \times LCM(P,R)}$

Q4. PROVE BY CONTRADICTION METHOD THAT TWO DISTINCT LINES IN A PLANE CANNOT INTERSECT IN MORE THAN ONE POINT.

Q5. SOLVE 10 DIFFERENT TYPES OF EXAMPLES RELATED TO CONCEPT " $HCF(A,B)LCM(A,B) = A \times B.$

Q6. SOLVE 5 STATEMENT PROBLEMS OF LINEAR EQUATIONS IN TWO VARIABLES ON EACH OF THE FOLLOWING TOPICS

- PROBLEMS ON AGES
- PROBLEMS BASED ON DISTANCE AND SPEED
- PROBLEMS BASED ON TIME AND WORK
- PROBLMES BASED ON TWO DIGIT NUMBERS.

- USE SEPARATE NOTE BOOK FOR HOLIDAYS HOME WORK.
- DO HOLIDAYS HOMEWORK YOURSELF ONLY, BUT IF YOU FIND PROBLEM THEN ONLY TAKE THE HELP OF YOUR ELDERS.