**MODERN PUBLIC SCHOOL**

**SEC 37, FARIDABAD**

**SESSION- 2023-24**

**Holiday Homework**

Class: X Subject: Mathematics

**GENERAL INSTRUCTIONS:**

1. Do your holidays homework in mathematics fair notebook.
2. Homework should be done neatly and accurately.
3. Project must be integrated with Art and prepared in eco friendly manner.
4. Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients.

(i) 5*x* 2  29*x*  20

(ii)

*x* 2  5*x*

1. Form the quadratic polynomials whose zeroes are (i) 3  2 (ii)  and

2

2

1. Find all the zeroes of *x* 3  6*x* 2  11*x*  6 if (*x*  1) is a factor.
2. Find the all the zeroes of

*x* 3 10*x* 2  31*x*  30

if 2 is a zero of it.

1. Find the values of ' *a*' and '*b*', if 2 and 3 are zeroes of *x* 3  *ax* 2  *bx*  30
2. Find the greatest number of 5 digits exactly divisible by 12, 15 and 36.
3. Find the smallest number which when increased by 20 is exactly divisible by 90 and 144.
4. Find the smallest number which leaves remainder 8 and 12 when divided by 28 and 32 respectively.
5. Floor of a room is to be fitted with square marble tiles of the largest possible size. The size of the room is 10 m × 7 m. What should be the size of tiles required that has to be cut and how many such tiles are required?
6. PROJECT WORK: Prepare a project on **LINEAR EQUATION IN TWO VARIABLES** (Defining, showing types of solution graphically). Formulate 3 questions related to Manipur and Haryana and show their solution on graph paper. One of the three is given below as hint:

Question 1: According to recent census 2022, the sum of population of Haryana and Manipur is 325 (in Lakh). Also the population of Haryana is 9 lakh more than eight times the population of Manipur. Find the population of Haryana and Manipur in year 2022.