**RISING TUTORIALS**

**CLASS X MATHEMATICS TEST DATE : 13-04-2024**

**CHAPTER 1, 2 & 3 FULL MAX MARKS : 30**

**ANSWER THE FOLLOWING QUESTIONS 2X3 =6 MARKS :**

1.Find the maximum number of students among whom 1001 pens and 910 pencils can be distributed in such a way that each student gets the same number of pens and the same number of pencils.

2.If −2 is a zero of the polynomial 3 x2 + 4x + 2k then find the value of k.

3. Do the following pair of linear equations have no solution? Justify your answer. 2x + 4y = 3 & 12y + 6x = 6

**ANSWER THE FOLLOWING QUESTIONS 3X3 = 9 MARKS :**

1. During a sale, colour pencils were being sold in packs of 24 each and crayons in packs of 32 each. If you want full packs of both and the same number of pencils and crayons, how many of each would you need to buy?

2. Find the zeroes of quadratic polynomial 3x2 − x − 4 and verify the relationship between the zeroes and the coefficients.

3. Kamal travelled 300 km by train and 200 km by taxi taking 5 hours 30 minutes.But,if he travels 260 km by train and 240 km by taxi,he takes 6 minutes longer.Find the speed of the train and that of the taxi.

**ANSWER THE FOLLOWING QUESTIONS 5X3 = 15 MARKS :**

1. a) Prove that √10 is an irrational number

b) Find the L.C.M and H.C.F. of 864 and 2520   by applying the fundamental theorem of arithmetic method i.e. using the prime factorisation method.

2. a) If α and β are zeroes of the polynomial  f(x)=2x2+5x+k  satisfying the relation α 2+β 2+αβ =214  then find the value of k

b) plot the graph for quadratic polynomial x2+ 3x + 2.

3. a) Graphically, find the number of solution for the following pair of linear equations in two variables: 6x – 3y + 10 = 0 2x – y + 9 = 0

b) 2 women and 5 men can together finish an embroidery work in 4 days, while 3 women and 6 men can finish it in 3 days. Find the time taken by 1 woman alone to finish the work, and also that taken by 1 man alone.