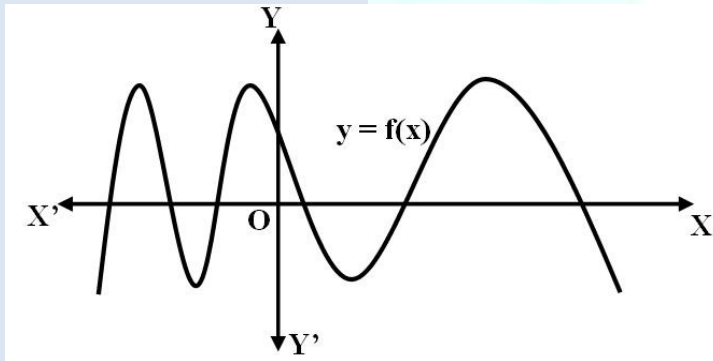


**BOARD EXAM REVISION TEST 01****CLASS: X****M.M. 40 Marks****T.T. 1 ½ hr****SECTION – A (1 marks each)**

- The length of a tangent from a point A at distance 5 cm from the centre of the circle is 4 cm. Find the radius of the circle.
- If  $P(E) = 0.28$ , what is the probability of 'not E'?
- Use Euclid's division algorithm to find the HCF of 135 and 225.
- Find the HCF of 96 and 404 by the prime factorisation method.
- Find a quadratic polynomial, the sum and product of whose zeroes are  $-3$  and  $2$ , respectively.
- Given that  $HCF(306, 657) = 9$ , find  $LCM(306, 657)$ .
- The graph of  $y = p(x)$  is given in below figure, for some polynomials  $p(x)$ . Find the number of zeroes of  $p(x)$ .



- Find the coordinates of the point which divides the join of  $(-1, 7)$  and  $(4, -3)$  in the ratio  $2 : 3$ .
- Find the coordinates of a point A, where AB is the diameter of a circle whose centre is  $(2, -3)$  and B is  $(1, 4)$ .

**SECTION – B (2 marks each)**

- A quadrilateral ABCD is drawn to circumscribe a circle. Prove that  $AB + CD = AD + BC$
- A die is thrown twice. What is the probability that (i) 5 will not come up either time? (ii) 5 will come up at least once?
- Find the zeroes of the quadratic polynomial  $x^2 + 7x + 10$ , and verify the relationship between the zeroes and the coefficients.
- A box contains 90 discs which are numbered from 1 to 90. If one disc is drawn at random from the box, find the probability that it bears (i) a perfect square number (ii) a number divisible by 5.
- One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting (i) a king of red colour (ii) a face card

**SECTION – C (3 marks each)**

- Prove that "The lengths of the two tangents from an external point to a circle are equal."
- Prove that  $\sqrt{3}$  is an irrational.
- Find all the zeroes of  $2x^4 - 3x^3 - 3x^2 + 6x - 2$ , if you know that two of its zeroes are  $\sqrt{2}$  and  $-\sqrt{2}$ .
- Find the ratio in which the line segment joining  $A(1, -5)$  and  $B(-4, 5)$  is divided by the x-axis. Also find the coordinates of the point of division.
- Find the point on the x-axis which is equidistant from  $(2, -5)$  and  $(-2, 9)$ .

**SECTION – D (4 marks each)**

20. Draw a triangle ABC with side  $BC = 7$  cm,  $B = 45^\circ$ ,  $A = 105^\circ$ .  
Then, construct a triangle whose sides are  $\frac{4}{3}$  times the corresponding sides of  $\Delta ABC$ .
21. Prove that “The ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides.”

