**Class – X Chapter – 4 Quadratic Equation**

1. Is x = -2 a solution of the equation x2 – 2x + 8 = 0?
2. Is $\sqrt{2}$x2 + 7x + 5$\sqrt{2}$ = 0 quadratic equation? If yes then give reason?
3. If (x + a) is a factor of 2x2 + 2ax + 5x + 10 = 0, then find the value of a.
4. Solve 4$\sqrt{3}$x2 + 5x – 2$\sqrt{3}$ = 0.
5. 2/x2 - 5/x + 2 = 0
6. X2 + 5x – (a2 + a -6) = 0
7. 4x2 – 4a2x + (a4 – b4) = 0
8. Find the discriminant of the quadratic equation x2 – 4x + 1 = 0.
9. If the discriminant of the equation 6x2 – bx + 2 = 0 is 1, then find the value of b.
10. Determine the nature of the roots: (i) 4x2 – 2x = 3 (ii) 3$\sqrt{3}$x2 + 10x + $\sqrt{3}$ = 0
11. The hypotenuse of right-angled triangle is 6m more than twice the shortest side. If the third side is 2m less than the hypotenuse, then find all sides of the triangle. (By Quadratic formula)
12. A rectangular park is to be designed whose breadth is 3m less than its length. Its area is to be 4 m2 more than the area of a park that has already been made in the shape of an isosceles triangle with its base as the breadth of the rectangular park and of altitude 12m. Find its length and breadth of the rectangular park.
13. A rectangular field is 20m long and 14m wide. There is a path of equal width all around it, having an area of 111 m2. Find the width of the path.
14. The area of a right-angled triangle is 480 cm2. If the base of the triangle is 8cm more than twice the height(altitude) of the triangle, then find the sides of the triangle.