PRACTICE QUESTIONS (POLYNOMIALS)
CLASS: X : MATHEMATICS

1. If α, β are the zeroes of the polynomial $P(x) = 4x^2 + 3x + 7$, then find the value of $\frac{1}{\alpha} + \frac{1}{\beta}$.
2. If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then find the value of k.
3. If p and q are the zeroes of the quadratic polynomial $f(x) = 2x^2 - 7x + 3$, find the value of $p + q - pq$.
4. If one zero of the quadratic polynomials: $kx^2 + 3x + k$ is 2, then find the value of k.
5. If one of the zeroes of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is –3, then find the value of k.
6. If zeroes of $p(x) = 2x^2 - 7x + k$ are reciprocal of each other, then find the value of k.
7. If the zeroes of the quadratic polynomial $x^2 + (a + 1)x + b$ are 2 and –3 then find a and b
8. Find the quadratic polynomial, the sum of whose zeroes is –5 & product is 6.
9. Find the value of m if polynomial $p(x) = 4x^2 - 6x - m$ is exactly divisible by $x - 3$.
10. Find a quadratic polynomial whose zeroes are –9 and –1/9.
11. If one zero of the quadratic polynomial $2x^2 + px + 4$ is 2, find the other zero. Also, find the value of *p*.
12. Find a quadratic polynomial whose one zero is 5 and product of zeroes is 30.
13. Find a quadratic polynomial whose zeroes are 3 and –5.
14. Find a quadratic polynomial whose zeroes are $5 + \sqrt{2}$ and $5 - \sqrt{2}$.
15. If the product of the zeroes of the polynomial $ax^2 - 6x - 6$ is 4, then find the value of a. Also find the sum of zeroes of the polynomial.
16. Find the zeroes of the quadratic polynomial $x^2 - 2x - 8$ and verify the relationship between the zeroes and the coefficients of the polynomial.
17. Find the zeroes of the quadratic polynomial $6x^2 - 3 - 7x$ and verify the relationship between the zeroes and the coefficients of the polynomial.
18. Find the zeroes of the quadratic polynomial $2x^2 - x - 6$ and verify the relationship between the zeroes and the coefficients of the polynomial.
19. Find the zeros of the polynomial $x^2 + \frac{1}{6}x - 2$, and verify the relation between the coefficients and zeros of the polynomial.
20. If the sum of the zeroes of the polynomial $p(x) = (k^2 - 14)x^2 - 2x - 12$ is 1, then find the value of k.