1. Find the nature of the roots of the given equation: x² + 2x + 3 = 0.

A. Rational and equal B. Equal **C. Imaginary** D. Irrational

2. If the roots of the equation are -3 and -8, then which of the following is that equation?

**A. x² + 11x + 24 = 0** B. x² – 11x – 24 = 0

C. x² – 11x + 24 = 0 D. x² + 11x – 24 = 0

3. What will be the sum of the roots of the equation 35x² – 2x + 1= 0

A. 1/35 B. 69/35 **C. 2/35** D. -1/35

4. Solve the equation x² – 7x + 10 = 0 and find its roots.

A. (3 +- √23)/2 **B. (3 +- √-5)/2** C. (-8,2) D. (8,-2)

5. If alpha and beta are the roots of the equation x² – 9x + 14 = 0 then find the value of A² +B².

A. 25 B. 28 **C. 53** D. 81

6. If one of the roots of the quadratic equation x2 + mx + 24 = 0 is 1.5, then what is the value of m?

A. -22.5 B. 16 C. -10.5 D. -17.5

7. If one of the roots of the quadratic equation 2x2 - 7x + q = 0 is 3, find the other root.

A. -3 B. -1/2 C. 1/2 D. ¼

8. If p and q are the roots of the equation x2 - bx + c = 0, what is the equation if the roots are

(pq + p + q) and (pq - p - q)?

A. x2 - 2cx + (c2 - b2) = 0 B. x2 - 2bx + (b2 + c2) = 0

C. bcx2 - 2(b + c)x + c2 = 0 D.x2 + 2bx - (c2 - b2) = 0

9. **For what values of 'm' is y = 0, if y = x2 + (2m + 1)x + m2 - 1? x is a real number.**

**A.** m ≥ -2 **B.** m < 0 C. m = 0 **D.** m ≥ -1.25

10. The roots of the equation 3x2 - 12x + 10 = 0 are?

A. rational and unequal B. Complex C. real and equal

D. irrational and unequal E. rational and equal

11. The sum and the product of the roots of the quadratic equation x2 + 20x + 3 = 0 are?

A. 10, 3 B. -10, 3 C. 20, -3 D. -10, -3

12. Find the value of a/b + b/a, if a and b are the roots of the quadratic equation x2 + 8x + 4 = 0?

A. 15 B. 14 C. 24 D. 26

13.http://allindiaexams.in/public/uploads/1410445341.png.

[A.](javascript:%20void(0)) -3, 1 [B.](javascript:%20void(0)) 3, -1 [C.](javascript:%20void(0)) 3, -2 [D.](javascript:%20void(0)) 3, 2

14. Find the quadratic equations whose roots are the reciprocals of the roots of 2x2 + 5x + 3 = 0?

[A.](javascript:%20void(0)) 3x2 + 5x - 2 = 0 [B.](javascript:%20void(0)) 3x2 + 5x + 2 = 0

[C.](javascript:%20void(0)) 3x2 - 5x + 2 = 0 [D.](javascript:%20void(0)) 3x2 - 5x - 2 = 0

15. If the roots of the equation 2x2 - 5x + b = 0 are in the ratio of 2:3, then find the value of b?

[A.](javascript:%20void(0)) 3 [B.](javascript:%20void(0)) 4 [C.](javascript:%20void(0)) 5 [D.](javascript:%20void(0)) 6

16. If a and b are the roots of the equation x2 - 9x + 20 = 0, find the value of a2 + b2 + ab?

[A.](javascript:%20void(0)) -21 [B.](javascript:%20void(0)) 1 [C.](javascript:%20void(0)) 61 [D.](javascript:%20void(0)) 21