Radical Equations and Radical Expressions

**^= square root as in square root of 6 as shown in problem #1**

1. What is the degree of f(x) =3x^6 +4x^2 +x – 1
2. What is the degree of f(x) = -2x^3 +x^2 + 3x -2
3. What is the leading coefficient of f(x) = 3x^6 +x^2 +x – 1
4. What is the leading coefficient of f(x = -2x ^3 +x^2 +3x -2
5. What is the nature of the roots of f(x) = x^2 +4x +16
6. What is the nature of the roots of f(x = x^2 +3x -9
7. What is the nature of the roots of f(x)= x^2 +2x +1
8. The solution of 3 (radical symbol)√ 3x -2 – 1< 1 is x> 10/3
9. Write a polynomial in simplest form with roots 3 and 5
10. Write a polynomial in simplest form with roots 5i and -5i
11. Write a polynomial in simplest form with roots -3 and -6
12. Write a polynomial in simplest form with roots 2, -2, and 4
13. Write a polynomial in simplest form with roots -2 and 3i and -3i
14. Find the roots of f (x) = x^2 – 8x + 15
15. Find the roots of f (x) = x^2 + 10
16. Find the roots of f (x) = x^2 + 2x -5
17. What is the remainder of (3x ^2 -6x +7)/ (x -2)
18. What is the remainder of (4x ^5 +5x ^4 -8x ^3 +2x ^2 +x -8)/ (x+1)
19. What is the remainder of (2x ^3 –x +7)/ (x +2)
20. Name all the possible rational roots of 3x ^4 – 5x ^3 + 6x ^2 +2x + 4
21. Name all the possible ration roots of f (x) = x ^4 – 6x ^3 + 3x ^2 – 7x + 8
22. Find all the roots of f (x) = x^3 – 2x ^2 – x + 2
23. Find all the roots of f (x) = 2x ^3 –x^2 -18x + 9
24. Solve y + 5/y = 6
25. Solve x – 2 = 4 - x + 4

 X x - 3

1. Solve (x – 1)(x – 2) ≥ 0

 X – 3

1. Solve (radical symbol) √ 2x + 1 - 5 = 8
2. Solve (radical symbol) √x -1 + 3 =x
3. Solve 3+ (radical symbol)√x -6 = (radical symbol) √x + 9