Solving Equations

Emphasis solving Polynomials – Descartes Rule of Signs

Determine the number or real zeros for each of the following:

1. $x^4 - 5x^2 - 36 = 0$	2. $x^3 + 3x^2 - 14x - 20 = 0$
3. $x^3 - 2x^2 + 3x - 6 = 0$	4. $x^4 - 14x^2 + 45 = 0$
5. $x^4 + 6x^2 + 8 = 0$	6. $x^4 + 3x^2 - 18 = 0$
7. $x^3 - 1 = 0$	8. $x^3 + 3x^2 - x - 3 = 0$
9. $x^3 - 2x^2 - 3x + 6 = 0$	10. $x^6 - 2x^4 - 4x^2 + 8 = 0$

11. $x^5 + 2x^4 + 11x^3 + 22x^2 + 24x + 48 = 0$	12. $x^6 + 5x^4 - 4x^2 - 20 = 0$
13. $x^6 - x^4 - x^2 + 1 = 0$	14. $x^8 - 26x^4 + 25 = 0$
15. $x^3 - 9x^2 + 33x - 25 = 0$	16. $x^3 + 2x^2 - 9x - 4 = 0$
17. $x^4 + 2x^3 - 7x^2 - 6x + 12 = 0$	18. $x^4 - 2x^3 - 6x^2 - 4x - 16 = 0$
19. $x^4 - x^3 - 5x^2 - 103x + 300 = 0$	20. $x^4 + 2x^3 + 2x - 1 = 0$