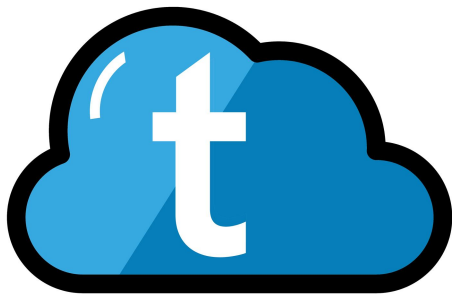




MATEMÁTICAS

Ecuaciones bicuadradas

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1. $x^4 - 25x^2 + 144 = 0$

2. $4x^4 + 19x^2 - 5 = 0$

3. $x^4 - 29x^2 + 100 = 0$

4. $9x^4 - 40x^2 + 16 = 0$

5. $x^4 - 13x^2 + 36 = 0$

6. $x^4 + 4x^2 + 3 = 0$

7. $x^4 + 5x^2 + 4 = 0$

8. $2x^4 - 3x^2 - 20 = 0$

9. $4x^4 - 37x^2 + 9 = 0$

10. $x^4 - 8x^2 - 9 = 0$

11. $x^4 - 24x^2 - 25 = 0$

12. $x^4 - 5x^2 + 4 = 0$

13. $2x^4 - x^2 + 1 = 0$

14. $2x^4 + 9x^2 = 68$

15. $x^4 + 3x^2 - 10 = 0$

16. $36x^4 - 13x^2 + 1 = 0$

17. $9x^4 + 16 = 40x^2$

18. $4x^4 - 5x^2 + 1 = 0$

19. $x^4 - 5x^2 - 36 = 0$

20. $x^4 + x^2 + 1 = 0$

21. $x^4 - 10x^2 + 9 = 0$

22. $x^4 - 16 = 0$

23. $x^4 - 9x^2 = 0$

24. $9x^4 + 5x^2 - 4 = 0$

25. $3x^4 - 26x^2 - 9 = 0$

26. $4x^4 - 17x^2 + 4 = 0$

27. $x^4 + 2x^2 - 3 = 0$

28. $2x^4 - x^2 - 1 = 0$

29. $x^4 - 3x^2 + 2 = 0$

30. $4x^4 - 13x^2 + 9 = 0$

31. $x^4 - 7x^2 + 12 = 0$

32. $3x^4 + x^2 - 4 = 0$

33. $8x^4 - x^2 - 7 = 0$

34. $5x^4 - 6x^2 - 351 = 0$

35. $(x^2 - 4)(x^2 + 1) = 0$

36. $(x^2 - 5)(x^2 - 3) = 0$

37. $(x^2 - 3)(9x^2 - 25) = 0$

38. $(x^2 - 1)(4x^2 - 9) = 0$

39. $\frac{x^2(x^2-9)}{20} + 1 = x^2 - 4$

40. $x^2 + \frac{10}{x^2} = 7$

41. $\frac{x^2}{x+2} = \frac{2-x}{x^2+2}$

42. $\frac{12x^2+8}{2x^2+4} = 8x^2 + 6$

Sol: $x_1=4, x_2=-4, x_3=3, x_4=-3$

Sol: $x_1=1/2, x_2=-1/2$

Sol: $x_1=5, x_2=-5, x_3=2, x_4=-2$

Sol: $x_1=2, x_2=-2, x_3=2/3, x_4=-2/3$

Sol: $x_1=2, x_2=-2, x_3=3, x_4=-3$

Sol: $\emptyset$

Sol: $\emptyset$

Sol: $x_1=2, x_2=-2$

Sol: $x_1=3, x_2=-3, x_3=1/2, x_4=-1/2$

Sol: $x_1=3, x_2=-3$

Sol: $x_1=5, x_2=-5$

Sol: $x_1=2, x_2=-2, x_3=1, x_4=-1$

Sol: $\emptyset$

Sol: $x_1=2, x_2=-2$

Sol: $x = \pm\sqrt{2}$

Sol: $x_1=1/2, x_2=-1/2, x_3=1/3, x_4=-1/3$

Sol: $x_1=2, x_2=-2, x_3=2/3, x_4=-2/3$

Sol: $x_1=1, x_2=-1, x_3=1/2, x_4=-1/2$

Sol: $x_1=3, x_2=-3$

Sol: $\emptyset$

Sol: $x_1=3, x_2=-3, x_3=1, x_4=-1$

Sol: $x_1=2, x_2=-2$

Sol: $x_1=0, x_2=3, x_3=-3$

Sol: $x_1=2/3, x_2=-2/3$

Sol: $x_1=3, x_2=-3$

Sol: $x_1=2, x_2=-2, x_3=1/2, x_4=-1/2$

Sol: $x_1=1, x_2=-1$

Sol: $x_1=1, x_2=-1$

Sol: $x_1=1, x_2=-1, x_3=\sqrt{2}, x_4=-\sqrt{2}$

Sol: $x_1=3/2, x_2=-3/2, x_3=1, x_4=-1$

Sol: $x_1=2, x_2=-2, x_3=\sqrt{3}, x_4=-\sqrt{3}$

Sol: $x_1=1, x_2=-1$

Sol: $x_1=1, x_2=-1$

Sol: $x_1=3, x_2=-3$

Sol: $x_1=2, x_2=-2$

Sol: $x_1=\sqrt{5}, x_2=-\sqrt{5}, x_3=\sqrt{3}, x_4=-\sqrt{3}$

Sol: $x_1=5/3, x_2=-5/3, x_3=\sqrt{3}, x_4=-\sqrt{3}$

Sol: $x_1=1, x_2=-1, x_3=3/2, x_4=-3/2$

Sol: $x_1=5, x_2=-5, x_3=2, x_4=-2$

Sol: $x_1=\sqrt{5}, x_2=-\sqrt{5}, x_3=\sqrt{2}, x_4=-\sqrt{2}$

Sol: $x_1=1, x_2=-1$

Sol: $\emptyset$





$$43. \frac{2}{x^2-9} = \frac{x^2-16}{72}$$

$$44. \frac{x^2-3}{4} = \frac{-28}{x^2-9}$$

$$45. 34 - x^2 = \frac{225}{x^2}$$

$$46. x^2 = \frac{12}{x^2+1}$$

$$\text{Sol.: } x_1=0, x_2=5, x_3=-5$$

$$\text{Sol.: } x_1=5, x_2=-5, x_3=4, x_4=-4$$

$$\text{Sol.: } x_1=5, x_2=-5, x_3=3, x_4=-3$$

$$\text{Sol.: } x = \pm\sqrt{3}$$