

Ecuaciones Irracionales

1. Resuelve la ecuación:

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|----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 1. $\sqrt{3x-8} - 2 = 0$ | 2. $\sqrt{4x-8} - 2 = 0$ | 3. $\sqrt{2x+2} - 2 = 0$ | 4. $\sqrt{4x+3} - 2 = 0$ | 5. $2 - \sqrt{3x+2} = 0$ |
| 6. $2 - \sqrt{2x+5} = 0$ | 7. $\sqrt{3x+10} - 1 = 0$ | 8. $4 - \sqrt{4x+17} = 0$ | 9. $3 - \sqrt{3x+12} = 0$ | 10. $\sqrt{3x+10} - 2 = 0$ |
| 11. $4 - \sqrt{12x+7} = 0$ | 12. $\sqrt{3x+13} - 3 = 0$ | 13. $4 - \sqrt{2x+15} = 0$ | 14. $\sqrt{2x+10} - 2 = 0$ | 15. $\sqrt{4x+103} = 10$ |
| 16. $5 - \sqrt{2x+23} = 0$ | 17. $\sqrt{4x+22} - 5 = 0$ | 18. $\sqrt{2x+22} - 5 = 0$ | 19. $\sqrt{3x+23} - 5 = 0$ | 20. $4 - \sqrt{4x+28} = 0$ |
| 21. $\sqrt{2} - \sqrt{4x+3} = 0$ | 22. $\sqrt{3x+71} - 5\sqrt{3} = 0$ | 23. $\sqrt{2x+31} - 4\sqrt{2} = 0$ | 24. $4\sqrt{2} - \sqrt{6x+35} = 0$ | 25. $5\sqrt{2} - \sqrt{4x+53} = 0$ |

2. Resuelve la ecuación:

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|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|
| 1. $1 - \sqrt{2x^2-1} = 0$ | 2. $\sqrt{4x^2+24} = 5$ | 3. $\sqrt{3x^2+22} = 5$ | 4. $\sqrt{4x^2-3} - 1 = 0$ | 5. $4 - \sqrt{x^2+15} = 0$ |
| 6. $\sqrt{x^2+21} - 5 = 0$ | 7. $\sqrt{4x^2-5} - 2 = 0$ | 8. $\sqrt{4x^2+7} - 4 = 0$ | 9. $\sqrt{x^2+24} - 5 = 0$ | 10. $\sqrt{2x^2+2} - 2 = 0$ |
| 11. $\sqrt{2x^2+7} - 3 = 0$ | 12. $\sqrt{12x^2+33} = 6$ | 13. $2 - \sqrt{4x^2-12} = 0$ | 14. $2 - \sqrt{16x^2-5} = 0$ | 15. $\sqrt{18x^2+7} - 3 = 0$ |
| 16. $\sqrt{16x^2+7} - 4 = 0$ | 17. $5 - \sqrt{3x^2+13} = 0$ | 18. $\sqrt{4x^2+12} - 4 = 0$ | 19. $5 - \sqrt{2x^2+17} = 0$ | 20. $\sqrt{18x^2+4} - 6 = 0$ |
| 21. $\sqrt{4x^2+15} - 4 = 0$ | 22. $\sqrt{2x^2-23} - 3 = 0$ | 23. $\sqrt{4x^2+35} - 6 = 0$ | 24. $\sqrt{9x^2+24} - 5 = 0$ | 25. $\sqrt{16x^2+16} - 5 = 0$ |

3. Resuelve la ecuación:

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|------------------------------------|----------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|
| 1. $2 - \sqrt{x^3+5} = 0$ | 2. $\sqrt{x^3+8} - 3 = 0$ | 3. $\sqrt{x^3+3} - 2 = 0$ | 4. $\sqrt{3x^3-77} = 2$ | 5. $\sqrt{3x^3-20} = 2$ |
| 6. $\sqrt{2x^3-1} - 1 = 0$ | 7. $\sqrt{2x^3+28} = 2$ | 8. $\sqrt{x^3+17} - 3 = 0$ | 9. $\sqrt{2x^3+3} - 1 = 0$ | 10. $\sqrt{8x^3+3} - 2 = 0$ |
| 11. $\sqrt{2x^3+2} - 2 = 0$ | 12. $2 - \sqrt{3x^3+7} = 0$ | 13. $3 - \sqrt{3x^3+6} = 0$ | 14. $\sqrt{27x^3+82} = 9$ | 15. $\sqrt{2x^3-12} - 2 = 0$ |
| 16. $\sqrt{3x^3-23} - 1 = 0$ | 17. $\sqrt{3x^3+12} - 3 = 0$ | 18. $\sqrt{2x^3+20} - 2 = 0$ | 19. $\sqrt{3x^3+90} - 3 = 0$ | 20. $\sqrt{3x^3+33} - 3 = 0$ |
| 21. $\sqrt{8x^3+9} - \sqrt{8} = 0$ | 22. $\sqrt{8x^3+33} = 2\sqrt{8}$ | 23. $\sqrt{24x^3+5} - \sqrt{8} = 0$ | 24. $\sqrt{24x^3+11} - \sqrt{8} = 0$ | 25. $3\sqrt{8} - \sqrt{8x^3+71} = 0$ |

4. Resuelve la ecuación:

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| 1. $\sqrt[3]{x+12} - 2 = 0$ | 2. $\sqrt[3]{2x+2} - 1 = 0$ | 3. $\sqrt[3]{4x+4} - 2 = 0$ | 4. $\sqrt[3]{2x+7} - 2 = 0$ | 5. $\sqrt[3]{x+26} - 3 = 0$ |
| 6. $3 - \sqrt[3]{x+25} = 0$ | 7. $\sqrt[3]{3x+7} - 2 = 0$ | 8. $2 - \sqrt[3]{3x+5} = 0$ | 9. $1 - \sqrt[3]{3x+13} = 0$ | 10. $\sqrt[3]{4x+17} - 1 = 0$ |
| 11. $\sqrt[3]{2x+11} - 2 = 0$ | 12. $\sqrt[3]{2x+31} - 3 = 0$ | 13. $\sqrt[3]{3x+10} - 2 = 0$ | 14. $2 - \sqrt[3]{3x+12} = 0$ | 15. $\sqrt[3]{4x+31} - 3 = 0$ |
| 16. $3 - \sqrt[3]{2x+28} = 0$ | 17. $3 - \sqrt[3]{4x+35} = 0$ | 18. $3 - \sqrt[3]{4x+24} = 0$ | 19. $\sqrt[3]{2x+25} - 3 = 0$ | 20. $\sqrt[3]{4x+43} - 3 = 0$ |
| 21. $\sqrt[3]{3x+7} - \sqrt[3]{3} = 0$ | 22. $\sqrt[3]{4x+3} - \sqrt[3]{2} = 0$ | 23. $\sqrt[3]{6x+13} - 2\sqrt[3]{2} = 0$ | 24. $3\sqrt[3]{3} - \sqrt[3]{6x+73} = 0$ | 25. $\sqrt[3]{3x+22} - 2\sqrt[3]{3} = 0$ |

5. Resuelve la ecuación:

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|--|--------------------------------------|--|---|---|
| 1. $\sqrt[3]{16x^2+18} = 3$ | 2. $\sqrt[3]{9x^2-13} = \sqrt[3]{3}$ | 3. $\sqrt[3]{4x^2-8} - 1 = 0$ | 4. $3 - \sqrt[3]{4x^2-9} = 0$ | 5. $\sqrt[3]{2x^2-5} - 3 = 0$ |
| 6. $2 - \sqrt[3]{9x^2-8} = 0$ | 7. $\sqrt[3]{4x^2+7} - 2 = 0$ | 8. $2 - \sqrt[3]{9x^2+7} = 0$ | 9. $2 - \sqrt[3]{4x^2+7} = 0$ | 10. $2 - \sqrt[3]{9x^2+4} = 0$ |
| 11. $\sqrt[3]{x^2+26} - 3 = 0$ | 12. $1 - \sqrt[3]{3x^2-11} = 0$ | 13. $\sqrt[3]{4x^2+11} - 3 = 0$ | 14. $3 - \sqrt[3]{3x^2+15} = 0$ | 15. $\sqrt[3]{2x^2+19} - 3 = 0$ |
| 16. $\sqrt[3]{16x^2+7} - 2 = 0$ | 17. $\sqrt[3]{2x^2-24} - 2 = 0$ | 18. $\sqrt[3]{3x^2+24} - 3 = 0$ | 19. $3 - \sqrt[3]{2x^2+25} = 0$ | 20. $3 - \sqrt[3]{9x^2+23} = 0$ |
| 21. $\sqrt[3]{4x^2-7} - \sqrt[3]{2} = 0$ | 22. $3 - \sqrt[3]{16x^2+18} = 0$ | 23. $\sqrt[3]{9x^2+5} - \sqrt[3]{9} = 0$ | 24. $\sqrt[3]{18x^2+1} - \sqrt[3]{9} = 0$ | 25. $2\sqrt[3]{3} - \sqrt[3]{9x^2+8} = 0$ |

6. Resuelve la ecuación:

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|--|---------------------------------|---------------------------------|--|----------------------------------|
| 1. $\sqrt[3]{2x^3-46} = 2$ | 2. $\sqrt[3]{24x^3+5} = 2$ | 3. $\sqrt[3]{2x^3+25} = 3$ | 4. $\sqrt[3]{8x^3+215} = 6$ | 5. $\sqrt[3]{2x^3-1} - 1 = 0$ |
| 6. $\sqrt[3]{x^3-26} - 1 = 0$ | 7. $\sqrt[3]{3x^3-2} - 1 = 0$ | 8. $\sqrt[3]{54x^3+218} = 6$ | 9. $\sqrt[3]{27x^3+215} = 6$ | 10. $\sqrt[3]{24x^3+213} = 6$ |
| 11. $\sqrt[3]{8x^3+31} = 2\sqrt[3]{4}$ | 12. $\sqrt[3]{x^3+28} - 3 = 0$ | 13. $2 - \sqrt[3]{2x^3+6} = 0$ | 14. $\sqrt[3]{2x^3-15} - 1 = 0$ | 15. $2 - \sqrt[3]{3x^3+11} = 0$ |
| 16. $1 - \sqrt[3]{2x^3+17} = 0$ | 17. $3 - \sqrt[3]{2x^3+81} = 0$ | 18. $\sqrt[3]{2x^3+55} - 1 = 0$ | 19. $3 - \sqrt[3]{2x^3-27} = 0$ | 20. $\sqrt[3]{2x^3+43} - 3 = 0$ |
| 21. $\sqrt[3]{2x^3+29} - 3 = 0$ | 22. $\sqrt[3]{3x^3+32} - 2 = 0$ | 23. $\sqrt[3]{3x^3+30} - 3 = 0$ | 24. $\sqrt[3]{8x^3+3} - \sqrt[3]{4} = 0$ | 25. $2 - \sqrt[3]{24x^3+11} = 0$ |

7. Resuelve la ecuación:

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|----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|
| 1. $\sqrt{4x+20} = 4\sqrt{3x+4}$ | 2. $3\sqrt{2x+14} = 4\sqrt{2x+7}$ | 3. $4\sqrt{x+10} = 3\sqrt{4x+20}$ | 4. $4\sqrt{x-1} - \sqrt{3x+10} = 0$ |
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5. $\sqrt{8x+6} - 3\sqrt{2x-1} = 0$	6. $4\sqrt{2x+5} - \sqrt{x+18} = 0$	7. $3\sqrt{3x+1} - 2\sqrt{x+8} = 0$	8. $4\sqrt{x+6} - 3\sqrt{x+13} = 0$
9. $2\sqrt{2x-3} - \sqrt{3x-2} = 0$	10. $\sqrt{4x+8} - 2\sqrt{4x-4} = 0$	11. $4\sqrt{x+6} - 3\sqrt{4x+4} = 0$	12. $3\sqrt{2x+2} - 2\sqrt{x+8} = 0$
13. $\sqrt{2x+8} - 2\sqrt{4x+9} = 0$	14. $\sqrt{2x+14} - \sqrt{4x+12} = 0$	15. $\sqrt{2x+17} - \sqrt{4x+16} = 0$	16. $3\sqrt{4x-15} - \sqrt{4x-7} = 0$
17. $4\sqrt{2x+1} - \sqrt{8x+28} = 0$	18. $\sqrt{4x+26} - 4\sqrt{6x-7} = 0$	19. $\sqrt{3x+44} - 4\sqrt{9x-9} = 0$	20. $\sqrt{4x+34} - 4\sqrt{2x+3} = 0$
21. $2\sqrt{3x+8} - \sqrt{9x+36} = 0$	22. $2\sqrt{4x+6} - \sqrt{6x+29} = 0$	23. $4\sqrt{2x+5} - \sqrt{3x+22} = 0$	24. $3\sqrt{4x+2} - \sqrt{4x+34} = 0$

8. Resuelve la ecuación:

1. $\sqrt{x^2+10x} = \sqrt{9x+12}$	2. $\sqrt{5x+1} - \sqrt{x^2+5x} = 0$	3. $\sqrt{8x^2-x} - \sqrt{9x+3} = 0$	4. $\sqrt{x^2+4x} - \sqrt{8x-3} = 0$
5. $\sqrt{x^2+2x} - \sqrt{6x-3} = 0$	6. $\sqrt{x^2+7x} - \sqrt{6x+6} = 0$	7. $\sqrt{x^2+9x} - \sqrt{9x+4} = 0$	8. $\sqrt{x^2+6x} - \sqrt{7x+2} = 0$
9. $\sqrt{x^2+7x} - \sqrt{8x+2} = 0$	10. $\sqrt{x^2+4x} - \sqrt{6x+3} = 0$	11. $\sqrt{x^2+8x} - \sqrt{8x+9} = 0$	12. $\sqrt{x^2+9x} - \sqrt{6x+4} = 0$
13. $\sqrt{x^2+4x} - \sqrt{3x+2} = 0$	14. $\sqrt{x^2+7x} - \sqrt{8x+2} = 0$	15. $\sqrt{x^2+2x} - \sqrt{3x+2} = 0$	16. $\sqrt{x^2+11x} - \sqrt{9x+3} = 0$
17. $\sqrt{6x^2-9x} - \sqrt{4x-6} = 0$	18. $\sqrt{4x^2+7x} - \sqrt{7x+1} = 0$	19. $\sqrt{x^2+10x} - \sqrt{9x+2} = 0$	20. $\sqrt{2x-3} - \sqrt{2x^2-3x} = 0$
21. $\sqrt{8x^2+7x} - \sqrt{9x+1} = 0$	22. $\sqrt{4x^2+6x} - \sqrt{9x+1} = 0$	23. $\sqrt{3x^2+8x} - \sqrt{6x+1} = 0$	24. $2\sqrt{x+1} - \sqrt{9x^2+13x} = 0$

9. Resuelve la ecuación:

1. $\sqrt{3x^2+4} = 2\sqrt{2x^2-4}$	2. $\sqrt{x^2+7} = 2\sqrt{3x^2-23}$	3. $2\sqrt{3x^2-8} = \sqrt{3x^2+4}$	4. $2\sqrt{2x^2+2} = \sqrt{2x^2+14}$
5. $\sqrt{2x^2-1} - \sqrt{3x^2-2} = 0$	6. $\sqrt{x^2+8} - 3\sqrt{2x^2-1} = 0$	7. $4\sqrt{2x^2+7} = 3\sqrt{3x^2+13}$	8. $\sqrt{2x^2+2} - \sqrt{3x^2+1} = 0$
9. $2\sqrt{x^2+3} - \sqrt{x^2+15} = 0$	10. $3\sqrt{2x^2+14} = 4\sqrt{3x^2+6}$	11. $4\sqrt{2x^2-7} - \sqrt{x^2+7} = 0$	12. $2\sqrt{2x^2-1} - \sqrt{3x^2+1} = 0$
13. $\sqrt{x^2+15} - 4\sqrt{2x^2-1} = 0$	14. $4\sqrt{2x^2-7} - \sqrt{x^2+12} = 0$	15. $\sqrt{2x^2+1} - 3\sqrt{2x^2-7} = 0$	16. $\sqrt{x^2+15} - 2\sqrt{2x^2+2} = 0$
17. $3\sqrt{x^2+7} - 4\sqrt{2x^2-9} = 0$	18. $\sqrt{16x^2-4} - \sqrt{8x^2+14} = 0$	19. $\sqrt{2x^2+14} - \sqrt{3x^2+13} = 0$	20. $\sqrt{2x^2-14} - \sqrt{3x^2-23} = 0$
21. $3\sqrt{3x^2+13} - 4\sqrt{x^2+8} = 0$	22. $2\sqrt{3x^2-3} - 3\sqrt{3x^2-8} = 0$	23. $3\sqrt{3x^2-26} - \sqrt{2x^2-9} = 0$	24. $3\sqrt{x^2+15} - 4\sqrt{3x^2+6} = 0$

10. Resuelve la ecuación:

1. $2x = \sqrt{14x-6}$	2. $2x = \sqrt{15x-9}$	3. $6x = \sqrt{9-15x}$	4. $x - \sqrt{8-2x} = 0$	5. $\sqrt{3x-2} - x = 0$
6. $x - \sqrt{8x-2} = 0$	7. $x - \sqrt{4x-3} = 0$	8. $\sqrt{3-2x} - x = 0$	9. $\sqrt{2x+3} - x = 0$	10. $x - \sqrt{2x+3} = 0$
11. $x - \sqrt{3x+4} = 0$	12. $3x - \sqrt{6x-1} = 0$	13. $6x - \sqrt{6-6x} = 0$	14. $3x - \sqrt{3x+6} = 0$	15. $2x - \sqrt{2x+2} = 0$
16. $\sqrt{2x+6} - 2x = 0$	17. $2x - \sqrt{4x+3} = 0$	18. $6x - \sqrt{21x-3} = 0$	19. $2x - \sqrt{10x-6} = 0$	20. $3x - \sqrt{3x+12} = 0$
21. $6x - \sqrt{6x+12} = 0$	22. $2x - \sqrt{10x+6} = 0$	23. $4x - \sqrt{20x+6} = 0$	24. $6x - \sqrt{51x-18} = 0$	25. $6x - \sqrt{42x+18} = 0$

11. Resuelve la ecuación:

1. $3x-1 = 3\sqrt{3x-3}$	2. $3x+2 = \sqrt{3x+14}$	3. $\sqrt{3x+1} - x-1 = 0$	4. $\sqrt{x+17} - x-5 = 0$	5. $3\sqrt{3x-1} - 3x = 1$
6. $\sqrt{4x-11} + 5 = 2x$	7. $\sqrt{4x+8} - x-2 = 0$	8. $\sqrt{x+4} - 2x-7 = 0$	9. $\sqrt{2x+15} - 9 = 2x$	10. $\sqrt{4x+13} - 2x = 7$
11. $3\sqrt{3x+3} - 5 = 3x$	12. $2\sqrt{2x+5} - 2x = 5$	13. $2\sqrt{2x+8} - 5 = 2x$	14. $\sqrt{3x+6} - 2x-1 = 0$	15. $4\sqrt{4x+7} - 4x = 11$
16. $2\sqrt{2x+13} - 5 = 2x$	17. $\sqrt{3x+3} - 3x+3 = 0$	18. $3\sqrt{3x-1} - 3x-1 = 0$	19. $2\sqrt{2x+19} - 11 = 2x$	20. $2x-2\sqrt{2x+1} + 1 = 0$
21. $\sqrt{3x+12} - 2x-5 = 0$	22. $\sqrt{3x+10} - 3x-8 = 0$	23. $\sqrt{4x+13} - 3x-6 = 0$	24. $6x-2\sqrt{2x+3} + 1 = 0$	25. $3x - \sqrt{3x+17} + 5 = 0$

12. Resuelve la ecuación:

1. $\sqrt{x^2+8} - x = 2$	2. $3x - \sqrt{x^2+3} = 1$	3. $\sqrt{3x^2+1} - x = 3$	4. $\sqrt{2x^2+7} - x = 2$	5. $3x - \sqrt{3x^2+1} = 1$
6. $2x-1 = \sqrt{3x^2-3}$	7. $3x-1 = \sqrt{9x^2-7}$	8. $3x-2 = \sqrt{3x^2-2}$	9. $x+5 = \sqrt{2x^2+14}$	10. $3x - \sqrt{2x^2+8} = 2$
11. $\sqrt{2x^2+1} - 2x = 7$	12. $\sqrt{3x^2-44} - x = 6$	13. $2x+9 = \sqrt{12x^2+9}$	14. $\sqrt{4x^2-8} - 4 = 2x$	15. $\sqrt{3x^2+6} - 5 = 2x$
16. $3x - \sqrt{2x^2-14} = 7$	17. $\sqrt{x^2+12} - x-2 = 0$	18. $\sqrt{4x^2+12} - 1 = 3x$	19. $x - \sqrt{3x^2-8} + 4 = 0$	20. $\sqrt{9x^2-15} - 5 = 3x$
21. $\sqrt{3x^2+6} - x-2 = 0$	22. $\sqrt{x^2+8} - 2x-5 = 0$	23. $\sqrt{2x^2+14} - 7 = 3x$	24. $x - \sqrt{4x^2-15} + 3 = 0$	25. $\sqrt{18x^2+4} - 10 = 3x$

13. Resuelve la ecuación:

1. $\sqrt{2x+10} - \sqrt{x+1} = 2$	2. $\sqrt{4x-4} - \sqrt{4x-7} = 1$	3. $\sqrt{3x-5} + 1 = \sqrt{4x-4}$	4. $\sqrt{2x+3} + 1 = \sqrt{4x+4}$
5. $3 - \sqrt{2x+4} = \sqrt{2x+7}$	6. $\sqrt{3x+14} - 1 = \sqrt{3x+7}$	7. $\sqrt{2x+15} - 2 = \sqrt{2x+3}$	8. $\sqrt{3x+18} - 2 = \sqrt{3x+6}$

9. $\sqrt{3x+14} - 2 = \sqrt{3x+2}$	10. $\sqrt{2x} - \sqrt{2x+8} + 2 = 0$	11. $2\sqrt{3x+1} - \sqrt{4x+5} = 1$	12. $\sqrt{3x+12} - \sqrt{3x+5} = 1$
13. $\sqrt{4x+11} - \sqrt{2x+2} = 2$	14. $\sqrt{3x+13} - \sqrt{2x+7} = 1$	15. $\sqrt{4x+13} - \sqrt{4x-2} = 3$	16. $\sqrt{4x+15} - \sqrt{2x+4} = 2$
17. $\sqrt{3x+19} - \sqrt{3x+4} = 3$	18. $\sqrt{3x+18} - \sqrt{3x+3} = 3$	19. $\sqrt{2x+18} - \sqrt{2x+11} = 1$	20. $2\sqrt{2x+6} - \sqrt{2x+3} = 3$
21. $\sqrt{2x+17} - \sqrt{2x+10} = 1$	22. $3\sqrt{2x+1} - \sqrt{2x+13} = 2$	23. $\sqrt{2x+1} - \sqrt{4x+5} + 2 = 0$	24. $\sqrt{2x+18} - \sqrt{x+5} - 2 = 0$

14. Resuelve la ecuación:

1. $2x+1 = \sqrt{8x^3+1}$	2. $3-x\sqrt{2x-2} = 3x$	3. $3x+1 = \sqrt{6x^3+1}$	4. $3-4x = \sqrt{9-8x^3}$	5. $4-x\sqrt{16x+41} = x$
6. $x\sqrt{7-6x} + 3 = 2x$	7. $x\sqrt{3x-2} + 3x = 2$	8. $\sqrt{9-8x^3} + 2x = 3$	9. $\sqrt{8x^3+9} - 3 = 4x$	10. $x\sqrt{5-2x} - x+4 = 0$
11. $x\sqrt{4x+5} - x-2 = 0$	12. $\sqrt{16x^3+9} + 3 = 8x$	13. $8x-x\sqrt{19-27x} = 6$	14. $4x-\sqrt{8x^3+1} - 1 = 0$	15. $2x-\sqrt{8x^3+1} + 1 = 0$
16. $\sqrt{1-3x^3} + 3x+1 = 0$	17. $5x+1+\sqrt{1-15x^3} = 0$	18. $4-x\sqrt{72x-23} = 11x$	19. $6-x\sqrt{48x-23} = 11x$	20. $\sqrt{81x^3+1} - 9x+1 = 0$
21. $\sqrt{1-24x^3} + 6x+1 = 0$	22. $\sqrt{40-3x^3} + 3x-2 = 0$	23. $\sqrt{12x^3-3} + 6x+3 = 0$	24. $2x+3+x\sqrt{43-18x} = 0$	25. $10x-3-\sqrt{40x^3+9} = 0$

15. Resuelve la ecuación:

1. $6-\sqrt{32-7x^2} = x^2$	2. $7-\sqrt{45-9x^2} = x^2$	3. $2x^2-3 = \sqrt{5x^2+5}$	4. $5-2x^2 = \sqrt{16-7x^2}$	5. $\sqrt{55-6x^2} + 8 = x^2$
6. $\sqrt{40-4x^2} + 7 = x^2$	7. $2x^4-4 = \sqrt{9x^2-20}$	8. $2x^4-\sqrt{21x^2+7} = 4$	9. $3x^3-3 = \sqrt{22x^2-7}$	10. $x^2-\sqrt{6x^2-5} - 2 = 0$
11. $4-\sqrt{15-11x^2} = 2x^2$	12. $2x^2-\sqrt{45-11x^2} = 7$	13. $9-2x^2 = \sqrt{45-11x^2}$	14. $2x^2-1 = \sqrt{21x^2-35}$	15. $8-\sqrt{55-19x^2} = 2x^2$
16. $2x^2-2 = \sqrt{17x^2-32}$	17. $6-2x^2 = \sqrt{35-19x^2}$	18. $9-x^2-\sqrt{77-13x^2} = 0$	19. $\sqrt{40-15x^2} + 2x^2 = 7$	20. $7-3x^2 = \sqrt{45-29x^2}$
21. $4x^2-\sqrt{55-24x^2} = 8$	22. $9-3x^2 = \sqrt{80-44x^2}$	23. $\sqrt{48-32x^2} + 3x^2 = 7$	24. $\sqrt{60-11x^2} + x^2-8 = 0$	25. $\sqrt{13x^2-3} - 2x^2+1 = 0$

16. Resuelve la ecuación:

1. $\sqrt{6x+21} - \sqrt{3} = \sqrt{6x+12}$	2. $\sqrt{8x-6} - \sqrt{4x-10} = 2\sqrt{2}$	3. $\sqrt{3x+15} - \sqrt{3x-9} = 2\sqrt{3}$	4. $\sqrt{12x+23} - \sqrt{9x+9} = \sqrt{3}$
5. $\sqrt{9x+24} - \sqrt{3} = \sqrt{6x+10}$	6. $\sqrt{4x+14} + \sqrt{2} = \sqrt{4x+20}$	7. $\sqrt{8x+24} - \sqrt{4x+5} = 2\sqrt{2}$	8. $\sqrt{3x+2} + 2\sqrt{3} = \sqrt{9x+24}$
9. $\sqrt{6x+21} - \sqrt{3} = \sqrt{12x+21}$	10. $\sqrt{4x+4} - \sqrt{8x-6} - \sqrt{2} = 0$	11. $\sqrt{9x+21} \sqrt{6x+9} - \sqrt{3} = 0$	12. $\sqrt{12x+39} - \sqrt{9x+21} = \sqrt{3}$
13. $\sqrt{3x+21} - \sqrt{3} = \sqrt{12x+39}$	14. $\sqrt{8x+10} + \sqrt{2x+16} = 6\sqrt{2}$	15. $\sqrt{4x+34} - 2\sqrt{2} = \sqrt{4x+18}$	16. $\sqrt{12x+43} - \sqrt{3} = \sqrt{9x+24}$
17. $\sqrt{9x-6} - \sqrt{3x+9} + \sqrt{3} = 0$	18. $\sqrt{2x+3} - \sqrt{4x+10} + \sqrt{2} = 0$	19. $\sqrt{6x+18} - \sqrt{6x-6} - 2\sqrt{3} = 0$	20. $\sqrt{6x+15} - \sqrt{6x-1} - 2\sqrt{2} = 0$
21. $\sqrt{12x+19} - \sqrt{9x+6} - \sqrt{3} = 0$	22. $\sqrt{6x+20} - \sqrt{8x+18} - \sqrt{2} = 0$	23. $\sqrt{4x-2} - \sqrt{6x+12} + 2\sqrt{2} = 0$	24. $\sqrt{8x+10} - \sqrt{8x+20} + \sqrt{2} = 0$

17. Resuelve la ecuación:

1. $\sqrt{2x+9} - \sqrt{8x+6} = \sqrt{2x+3}$	2. $\sqrt{8x+16} - \sqrt{4x+1} = \sqrt{4x+7}$	3. $\sqrt{9x-3} + \sqrt{3x+1} = \sqrt{12x+4}$
4. $\sqrt{2x+3} + \sqrt{2x+6} = \sqrt{2x+11}$	5. $\sqrt{6x+9} - \sqrt{6x-7} = 2\sqrt{4x-4}$	6. $\sqrt{2x+10} - \sqrt{4x+6} = \sqrt{2x+2}$
7. $\sqrt{4x+13} - \sqrt{2x+3} = \sqrt{4x+8}$	8. $\sqrt{12x+11} - \sqrt{9x-9} = \sqrt{3x+8}$	9. $\sqrt{4x+3} + \sqrt{4x+9} = \sqrt{8x+20}$
10. $\sqrt{2x+5} - \sqrt{x-1} - \sqrt{4x-4} = 0$	11. $\sqrt{x-1} + \sqrt{3x-2} - \sqrt{3x+3} = 0$	12. $\sqrt{2x+7} - \sqrt{x+3} - \sqrt{3x-2} = 0$
13. $2\sqrt{4x+13} - 3\sqrt{x+2} = \sqrt{x+10}$	14. $2\sqrt{4x+1} - \sqrt{4x-4} = 2\sqrt{3x-2}$	15. $\sqrt{9x+15} + \sqrt{6x+5} = \sqrt{9x+30}$
16. $\sqrt{8x+20} - 2\sqrt{4x+3} = \sqrt{8x+4}$	17. $2\sqrt{3x+7} - \sqrt{4x+8} = 2\sqrt{4x+5}$	18. $2\sqrt{2x+13} - 2\sqrt{x+6} = \sqrt{4x+12}$
19. $2\sqrt{x+8} + \sqrt{4x+20} = 2\sqrt{4x+25}$	20. $2\sqrt{6x+11} - \sqrt{4x+10} = 2\sqrt{2x+3}$	21. $2\sqrt{6x+21} - \sqrt{8x+12} = 2\sqrt{2x+9}$
22. $3\sqrt{x+8} - \sqrt{3x+6} - 3\sqrt{2x+2} = 0$	23. $\sqrt{3x+23} - \sqrt{12x-4} - \sqrt{3x-1} = 0$	24. $3\sqrt{4x+5} - \sqrt{3x+6} - 3\sqrt{3x+1} = 0$

1.1. 4	1.2. 3	1.3. 1	1.4. $\frac{1}{4}$	1.5. $\frac{2}{3}$	1.6. $\frac{-1}{2}$	1.7. -3	1.8. $\frac{-1}{4}$	1.9. -1	1.10. -2	1.11. $\frac{3}{4}$	1.12. $\frac{-4}{3}$	1.13. $\frac{1}{2}$	1.14. -3	1.15. $\frac{-3}{4}$	1.16. 1	1.17. $\frac{3}{4}$
1.18. $\frac{3}{2}$	1.19. $\frac{2}{3}$	1.20. -3	1.21. $\frac{-1}{4}$	1.22. $\frac{4}{3}$	1.23. $\frac{1}{2}$	1.24. $\frac{-1}{2}$	1.25. $\frac{-3}{4}$	2.1. ± 1	2.2. $\pm \frac{1}{2}$	2.3. ± 1	2.4. ± 1	2.5. ± 1	2.6. ± 2	2.7. $\pm \frac{3}{2}$	2.8. $\pm \frac{3}{2}$	2.9.
± 1	2.10. ± 1	2.11. ± 1	2.12. $\pm \frac{1}{2}$	2.13. ± 2	2.14. $\pm \frac{3}{4}$	2.15. $\pm \frac{1}{3}$	2.16. $\pm \frac{3}{4}$	2.17. ± 2	2.18. ± 1	2.19. ± 2	2.20. $\pm \frac{4}{3}$	2.21. $\pm \frac{1}{2}$	2.22. ± 4	2.23. $\pm \frac{1}{2}$	2.24. $\pm \frac{1}{4}$	
2.25. $\pm \frac{3}{4}$	3.1. -1	3.2. 1	3.3. 1	3.4. 3	3.5. 2	3.6. 1	3.7. -2	3.8. -2	3.9. -1	3.10. $\frac{1}{2}$	3.11. 1	3.12. -1	3.13. 1	3.14. $\frac{-1}{3}$	3.15. 2	3.16. 2
3.17. -1	3.18. -2	3.19. -3	3.20. -2	3.21. $\frac{-1}{2}$	3.22. $\frac{-1}{2}$	3.23. $\frac{1}{2}$	3.24. $\frac{-1}{2}$	3.25. $\frac{1}{2}$	4.1. -4	4.2. $\frac{-1}{2}$	4.3. 1	4.4. $\frac{1}{2}$	4.5. 1	4.6. 2	4.7. $\frac{1}{3}$	4.8. 1
4.9. -4	4.10. -4	4.11. $\frac{-3}{2}$	4.12. -2	4.13. $\frac{-2}{3}$	4.14. $\frac{-4}{3}$	4.15. -1	4.16. $\frac{-1}{2}$	4.17. -2	4.18. $\frac{3}{4}$	4.19. 1	4.20. -4	4.21. $\frac{-4}{3}$	4.22. $\frac{-1}{4}$	4.23. $\frac{1}{2}$	4.24. $\frac{4}{3}$	4.25. $\frac{2}{3}$
5.1. $\pm \frac{3}{4}$	5.2. $\pm \frac{4}{3}$	5.3. $\pm \frac{3}{2}$	5.4. ± 3	5.5. ± 4	5.6. $\pm \frac{4}{3}$	5.7. $\pm \frac{1}{2}$	5.8. $\pm \frac{1}{3}$	5.9. $\pm \frac{1}{2}$	5.10. $\pm \frac{2}{3}$	5.11. ± 1	5.12. ± 2	5.13. ± 2	5.14. ± 2	5.15. ± 2	5.16. $\pm \frac{1}{4}$	
5.17. ± 4	5.18. ± 1	5.19. ± 1	5.20. $\pm \frac{2}{3}$	5.21. $\pm \frac{3}{2}$	5.22. $\pm \frac{3}{4}$	5.23. $\pm \frac{2}{3}$	5.24. $\pm \frac{2}{3}$	5.25. $\pm \frac{4}{3}$	6.1. 3	6.2. $\frac{1}{2}$	6.3. 1	6.4. $\frac{1}{2}$	6.5. 1	6.6. 3	6.7. 1	6.8. $\frac{-1}{3}$
6.9. $\frac{1}{3}$	6.10. $\frac{1}{2}$	6.11. $\frac{1}{2}$	6.12. -1	6.13. 1	6.14. 2	6.15. -1	6.16. -2	6.17. -3	6.18. -3	6.19. 3	6.20. -2	6.21. -1	6.22. 1	6.23. -1	6.24. $\frac{1}{2}$	6.25.
$\frac{-1}{2}$	7.1. -1	7.2. 1	7.3. -1	7.4. 2	7.5. $\frac{3}{2}$	7.6. -2	7.7. 1	7.8. 3	7.9. 2	7.10. 2	7.11. 3	7.12. 1	7.13. -2	7.14. 1	7.15. $\frac{1}{2}$	7.16. 4
7.17. $\frac{1}{2}$	7.18. 3	7.19. $\frac{4}{3}$	7.20. $\frac{-1}{2}$	7.21. $\frac{4}{3}$	7.22. $\frac{1}{2}$	7.23. -2	7.24. $\frac{1}{2}$	8.1. 3	8.2. 1	8.3. $\frac{-1}{4}, \frac{3}{2}$	8.4. 1, 3	8.5. 1, 3	8.6. 2	8.7. 2	8.8. 2	8.9. 2
8.10. 3	8.11. 3	8.12. 1	8.13. 1	8.14. 2	8.15. 2	8.16. 1	8.17. $\frac{3}{2}$	8.18. $\frac{1}{2}$	8.19. 1	8.20. $\frac{3}{2}$	8.21. $\frac{1}{2}$	8.22. 1	8.23. $\frac{1}{3}$	8.24. $\frac{1}{3}$	9.1. ± 2	9.2. ± 3
9.3. ± 2	9.4. ± 1	9.5. ± 1	9.6. ± 1	9.7. ± 1	9.8. ± 1	9.9. ± 1	9.10. ± 1	9.11. ± 3	9.12. ± 1	9.13. ± 1	9.14. ± 2	9.15. ± 2	9.16. ± 1	9.17. ± 3	9.18. $\pm \frac{3}{2}$	9.19. ± 1
9.20. ± 3	9.21. ± 1	9.22. ± 2	9.23. ± 3	9.24. ± 1	10.1. $\frac{1}{2}, 3$	10.2. $\frac{3}{4}, 3$	10.3. $\frac{1}{3}$	10.4. 1	10.5. 2	10.6. 2	10.7. 1, 3	10.8. 1	10.9. 3	10.10. 3	10.11. 4	10.12.
$\frac{1}{3}$	10.13. $\frac{1}{3}$	10.14. 1	10.15. 1	10.16. $\frac{3}{2}$	10.17. $\frac{3}{2}$	10.18. $\frac{1}{4}, \frac{1}{3}$	10.19. 1, $\frac{3}{2}$	10.20. $\frac{4}{3}$	10.21. $\frac{2}{3}$	10.22. 3	10.23. $\frac{3}{2}$	10.24. $\frac{2}{3}, \frac{3}{4}$	10.25. $\frac{3}{2}$	11.1. $\frac{4}{3}$		
$\frac{7}{3}$	11.2. $\frac{2}{3}$	11.3. 0, 1	11.4. -1	11.5. $\frac{2}{3}, \frac{5}{3}$	11.6. 3	11.7. -2, 2	11.8. -3	11.9. -3	11.10. -3	11.11. $\frac{-2}{3}, \frac{1}{3}$	11.12. $\frac{-5}{2}, \frac{-1}{2}$	11.13. $\frac{1}{2}$	11.14. 1	11.15.		
$\frac{-3}{4}$	11.16. $\frac{3}{2}$	11.17. 2	11.18. $\frac{2}{3}, \frac{5}{3}$	11.19. $\frac{-3}{2}$	11.20. $\frac{-1}{2}, \frac{3}{2}$	11.21. -1	11.22. -2	11.23. -1	11.24. $\frac{1}{2}$	11.25. $\frac{-1}{3}$	12.1. 1	12.2. 1	12.3. -1, 4	12.4. 1,		
3	12.5. 1	12.6. 2	12.7. $\frac{4}{3}$	12.8. 1	12.9. -1, 11	12.10. 2	12.11. -2	12.12. -4, 10	12.13. $\frac{-3}{2}, 6$	12.14. $\frac{-3}{2}$	12.15. -1	12.16. 3	12.17. 2	12.18. 1		
12.19. -2, 6	12.20. $\frac{-4}{3}$	12.21. 1	12.22. -1	12.23. -1	12.24. -2, 4	12.25. $\frac{-4}{3}, 8$	13.1. 3	13.2. 2	13.3. 2, 10	13.4. 3	13.5. $\frac{-3}{2}$	13.6. $\frac{2}{3}$	13.7. $\frac{1}{2}$			
13.8. $\frac{-2}{3}$	13.9. $\frac{2}{3}$	13.10. $\frac{1}{2}$	13.11. 1	13.12. $\frac{4}{3}$	13.13. $\frac{-1}{2}, \frac{7}{2}$	13.14. -3, 1	13.15. $\frac{3}{4}$	13.16. $\frac{-3}{2}, \frac{5}{2}$	13.17. -1	13.18. $\frac{-2}{3}$	13.19. -1	13.20. -1	13.21. $\frac{-1}{2}$			
13.22. $\frac{3}{2}$	13.23. 1, 5	13.24. -1	14.1. $\frac{-1}{2}, 0, 1$	14.2. 1	14.3. 0, 2	14.4. -3, 0	14.5. $\frac{1}{2}$	14.6. $\frac{-3}{2}$	14.7. $\frac{2}{3}$	14.8. $\frac{-3}{2}, 0, 1$	14.9. 0, 3	14.10. -2	14.11. 1			
14.12. 1, 3	14.13. -3	14.14. 1	14.15. $\frac{-1}{2}, 0, 1$	14.16. -2, -1	14.17. -1, $\frac{-2}{3}$	14.18. $\frac{1}{3}$	14.19. $\frac{1}{2}$	14.20. $\frac{1}{3}, \frac{2}{3}$	14.21. -1, $\frac{-1}{2}$	14.22. -3, -2	14.23. -1					
14.24. $\frac{-1}{3}$	14.25. 1, $\frac{3}{2}$	15.1. $\pm 2, \pm 1$	15.2. $\pm 2, \pm 1$	15.3. ± 2	15.4. $\pm \frac{3}{2}, \pm 1$	15.5. ± 3	15.6. ± 3	15.7. $\pm 2, \pm \frac{3}{2}$	15.8. ± 3	15.9. ± 2	15.10. ± 3	15.11. $\pm 1, \pm \frac{1}{2}$				
15.12. ± 2	15.13. $\pm 2, \pm \frac{3}{2}$	15.14. $\pm 2, \pm \frac{3}{2}$	15.15. $\pm \frac{3}{2}, \pm 1$	15.16. $\pm 2, \pm \frac{3}{2}$	15.17. $\pm 1, \pm \frac{1}{2}$	15.18. $\pm 2, \pm 1$	15.19. $\pm \frac{3}{2}, \pm 1$	15.20. $\pm 1, \pm \frac{2}{3}$	15.21. $\pm \frac{3}{2}$	15.22. $\pm 1, \pm \frac{1}{3}$						
15.23. $\pm 1, \pm \frac{1}{3}$	15.24. $\pm 2, \pm 1$	15.25. ± 2	16.1. $\frac{-3}{2}$	16.2. 3, 7	16.3. 4	16.4. $\frac{1}{3}, \frac{13}{3}$	16.5. $\frac{1}{3}$	16.6. -3	16.7. $\frac{-3}{4}, \frac{13}{4}$	16.8. $\frac{1}{3}$	16.9. $\frac{-3}{2}$	16.10. 1	16.11.			
-1, 3	16.12. -1, 3	16.13. -3	16.14. 1	16.15. -4	16.16. $\frac{-4}{3}, \frac{8}{3}$	16.17. 1	16.18. $\frac{-1}{2}$	16.19. $\frac{3}{2}$	16.20. $\frac{1}{2}$	16.21. $\frac{2}{3}, \frac{14}{3}$	16.22. -2	16.23. 1, 25	16.24. $\frac{-1}{4}$			
17.1. $\frac{-1}{2}$	17.2. $\frac{1}{4}$	17.3. $\frac{2}{3}$	17.4. -1	17.5. $\frac{3}{2}$	17.6. $\frac{-1}{2}$	17.7. -1	17.8. $\frac{4}{3}$	17.9. $\frac{-1}{4}$	17.10. 2	17.11. 2	17.12. 1	17.13. -1	17.14. 2	17.15. $\frac{-1}{3}$	17.16.	
$\frac{-1}{4}$	17.17. -1	17.18. -2	17.19. -4	17.20. $\frac{-1}{2}$	17.21. $\frac{-1}{2}$	17.22. 1	17.23. $\frac{4}{3}$	17.24. 1								