

ECUACIONES RACIONALES

$$1. \frac{3}{x+1} = \frac{x}{x-1} - 1$$

$$2. \frac{x+2}{x-1} - \frac{x+3}{x+1} = \frac{2x+2}{x^2-1}$$

$$3. \frac{2}{x+1} + \frac{3x-3}{x^2-1} = \frac{2}{x-1} + \frac{7}{x+1}$$

$$4. \frac{5}{x-1} - \frac{3}{x+4} - \frac{3}{x^2+3x-4} = \frac{5}{x-1}$$

$$5. \frac{15}{x-2} - \frac{12x+6}{x^2-4} = \frac{18}{x+2}$$

$$6. \frac{1}{x-a} + \frac{1}{x+a} = \frac{1}{x^2-a^2}$$

$$7. \frac{1 + \frac{x+1}{x-1}}{2 - \frac{x-1}{x+1}} = 2$$

$$8. \frac{x-1}{x+1} - \frac{3+x}{x} = 2$$

$$9. \frac{x-1}{x+1} - \frac{3+x}{x-1} = 2$$

$$10. \frac{3}{x + \frac{1}{2 + \frac{x+1}{x-2}}} = \frac{1}{x}$$

$$11. \frac{\frac{x-3}{2} - \frac{x-3}{4}}{x - \frac{1}{1 - \frac{x-1}{x+1}}} = -\frac{1}{x}$$

Soluciones.

1. $x=2$

2. $x=3$

3. $x=0$

4. $x=0$

5. $x=4$

6. $x=1/2$

7. $x=3$

8. $x=3$ $x=-1/2$

9. $x=-3$ $x=0$

10. $x=1/2$ $x=3/2$

11. $x=1$ $x=2$

ECUACIONES IRRACIONALES

1. $x + \sqrt{x} = 30$

2. $\sqrt{x} + 1 = \sqrt{x+9}$

3. $\sqrt{7-3x} - x = 7$

4. $\sqrt{x+4} = 3 - \sqrt{x-1}$

5. $5\sqrt{x} + 3 = 2x$

6. $3\sqrt{6x+1} - 5 = 2x$

7. $\sqrt{4x+5} - \sqrt{3x+1} = 1$

8. $\sqrt{2x-1} + \sqrt{x+4} = 6$

9. $1 + \sqrt{x+1} = \frac{x}{3}$

10. $\sqrt{x^3} - 2\sqrt{x} = \sqrt{x}$

11. $\sqrt{x-3} + \sqrt{x+4} = \sqrt{4x+1}$

12. $2\sqrt{x+4} = \sqrt{5x+4}$

13. $\sqrt{x^2+3x+7} = 5$

14. $3 - \sqrt{x} = x + 1$

15. $2\sqrt{2x-1} = \sqrt{6x-5} + \sqrt{2x-9}$

16. $\sqrt{2x+5} + 6 = 3x + 3$

17. $\sqrt{3x+10} = 1 + \sqrt{3x+3}$

18. $\sqrt{3x-2} - 4 = 0$

19. $\sqrt{2x+1} = x - 1$

20. $\sqrt{2x-1} + \sqrt{2x+1} = \frac{1}{\sqrt{2x-1}}$

21. $\frac{21}{\sqrt{6x+1}} - \sqrt{6x+1} = 2\sqrt{3x}$

22. $\frac{3}{\sqrt{x}} = \frac{6}{\sqrt{3x+4}}$

23. $\sqrt{2} + \sqrt{\frac{2^3}{x}} = \sqrt{2x}$

24. $\sqrt{x+6} + \sqrt{x+11} = \sqrt{5-10x}$

25. $\sqrt{9\sqrt{15-x}} = 6\sqrt{2x+3}$

Soluciones:

1. $x=25, x=36;$

2. $x=16;$

3. $x=-3, x=-14;$

4. $x=13/9;$

5. $x=9, x=1/4;$

6. $x=8, x=1/2;$

7. $x=5, x=1;$

8. $x=5, x=221;$

9. $x=15, x=0;$

10. $x=0, x=3;$

11. $x=12;$

12. $x=12;$

13. $x=3, x=-6;$

14. $x=1, x=4;$

15. $x=5;$

16. $x=2/9, x=2;$

17. $x=2;$

18. $x=6;$

19. $x=4, x=0;$

20. $x=5/8;$

21. $x=4/3;$

22. $x=4;$

23. $x=4, x=1;$

24. $x=-2, x=3/7;$

25. $x=-1$

ECUACIONES BICUADRADAS Y BICÚBICAS

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

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

3. $x^6 - 9x^3 + 8 = 0$

4. $x^6 - 26x^3 - 27 = 0$

5. $6x^4 + 2x^2 - 8 = 0$

6. $x^4 - 4x^2 = 0$

7. $4x^4 - 17x^2 + 4 = 0$

8. $9x^4 - 3x^2 + 4 = 0$

9. $x^4 - 6x^2 - 27 = 0$

10. $x^6 + 7x^3 - 8 = 0$

11. $x^4 - 2x^2 - 8 = 0$

12. $x^6 + 28x^3 + 27 = 0$

Soluciones:

1. $x_1 = 1, x_2 = 2;$

2. $x = 1;$

3. $x = 2, x = 1;$

4. $x = -1, x = 3;$

5. $x = 1;$

6. $x = 0, x = 2;$

7. $x = 2, x = 1/2$

8. $x = 1/3, x = 2$

9. $x = 3$

10. $x = 1, x = -2$

11. $x = 2$

12. $x = -1, x = -3$

www.yoquieroaprobar.es