

Repaso para el Examen I de Precalculo I

Simplifique las siguientes expresiones

$$1. \frac{x^2 + 4x - 12}{3x - 6} =$$

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

$$3. \frac{12 + x - x^2}{2x^2 - 9x + 4} =$$

$$4. \frac{2x^2 + x - 6}{x^2 + 4x - 5} * \frac{x^3 - 3x^2 + 2x}{4x^2 - 6x} =$$

$$5. \frac{2x^2 + x - 6}{x^2 + 4x - 5} \div \frac{x^3 - 3x^2 + 2x}{4x^2 - 6x} =$$

$$6. \frac{x}{x-3} - \frac{2}{3x+4} =$$

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

$$8. \frac{\left(\frac{2}{x} - 3\right)}{\left(1 - \frac{1}{x-1}\right)} =$$

$$9. \frac{5}{x-1} - \frac{x}{x-1} =$$

$$10. 6 - \frac{5}{x+3} =$$

$$11. \frac{x}{x-1} \cdot \frac{x^2-1}{x^2} =$$

$$12. \frac{3(x+y)}{4} \div \frac{x+4}{2} =$$

$$13. \frac{\frac{x}{2}-1}{x-2}$$

Resuelva las siguientes ecuaciones

$$14. 3x - 4 = 2$$

$$15. 3x - 4 = 2x - 6$$

$$16. \frac{1}{2}x - \frac{3}{4} = \frac{5}{6}$$

$$17. \frac{1}{x-2} = \frac{3}{x+2} - \frac{6x}{x^2-4}$$

$$18. x^2 + 3x = 9$$

$$19. 8x^2 - 24x + 18 = 0$$

$$20. 3x^4 = 48x^2$$

$$21. x^3 - 3x^2 - 3x + 9 = 0$$

$$22. 4x^{3/2} - 8 = 0$$

$$23. \sqrt{2x+7} - x = 2$$

$$24. |x-2| = 3$$

$$25. |x^2 - 3x| = -4x + 6$$

Resuelva las siguientes desigualdades

$$26. 5x - 7 > 3x + 9$$

$$27. 1 - \frac{3x}{2} = x - 4$$

$$28. -3 < 6x - 1 < 3$$

$$29. |x-2| < 2$$

$$30. |x+3| \geq 7$$

$$31. x^2 - x - 6 < 0$$

$$32. \frac{2x-7}{x-5} \leq 3$$