

Исследовать функцию и построить график

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

$$2. y = \frac{x^2 + 9}{16x^2 + 16x + 1}$$

$$3. y = \frac{4x^3 + 3x^2 - 8x - 2}{x - 3x^2}$$

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

$$5. y = \frac{2x^3 - 5x}{5 - 3x^2}$$

$$6. y = \frac{x^2 - 6x + 4}{(3x - 2)(5x - 30)}$$

$$7. y = \frac{4x^3 - 3x}{4x^2 - 1}$$

$$8. y = \frac{x^2 - 6x + 4}{3x - 2}$$

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

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

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

$$12. y = \frac{2x^3 + 1}{x^2(5x - 2)}$$

$$13. y = -\frac{4(5x - 2)}{x^2 + 2x - 3}$$

$$14. y = \frac{8(x - 1)}{(x + 1)^2}$$

$$15. y = \frac{x^3 - 27x + 54}{x^3}$$

$$16. y = -\left(\frac{x}{3x^2 - 4}\right)^2$$

$$17. y = \frac{4(x^3-4x)^2}{x^2+2x+4}$$

$$18. y = -\left(\frac{x+3}{7x^2-8}\right)^2$$

$$19. y = \frac{10}{x^2+8x-15}$$

$$20. y = \frac{4x^2-2x}{4x^2-4}$$

$$21. y = -\frac{x^2+3x-2}{2-3x^2}$$

$$22. y = \frac{x^3-4x}{3x^2-4}$$

$$23. y = \frac{4x^3+4x^2-4x}{3x^2-4}$$

$$24. y = -\frac{x^2+6x+9}{4x-8}$$

$$25. y = \frac{x^4-x}{3x^2-5}$$