

Quotient Rule

Find the derivative.

1. $f(x) = (x^3 - 2x)(3x^2)$

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

3. $f(x) = \frac{x^2}{x-1}$

4. $f(x) = 3x^4 + \frac{a}{x^6} + \frac{1}{bx^7} + \sqrt[4]{x^9} + \frac{1}{\sqrt[11]{x^5}} + \pi^7$

5. $f(x) = \frac{2x+3}{4x-1}$

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

7. $f(x) = \frac{x^3 - 3x^2 + 5x}{5x}$

8. $f(x) = \frac{x^2}{x^3 + 2x + 1}$

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

10. $f(x) = \frac{x+5}{x}$

11. $f(x) = \left(\frac{x+5}{x-2}\right)^3$

12. Find the equation of the tangent line to the function $f(x) = \frac{2x+3}{3x-2}$ at the point (1, 5).