

The Quotient Rule

differentiate with respect to x :

1.

$$y = \frac{x}{x+2}$$

2.

$$y = \frac{4x}{x+3}$$

3.

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

4.

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

5.

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

6.

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

7.

$$y = \frac{x^2+5}{4-x}$$

8.

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

9.

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

10.

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

The Quotient Rule

answers:

1.

$$\frac{1}{x+2} - \frac{x}{(x+2)^2}$$

2.

$$\frac{4}{x+3} - \frac{4x}{(x+3)^2}$$

3.

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

4.

$$\frac{1}{x^2+3} - \frac{2x(x-2)}{(x^2+3)^2}$$

5.

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

6.

$$\frac{2x}{x^2+3} - \frac{2x(x^2-2)}{(x^2+3)^2}$$

7.

$$\frac{x^2+5}{(4-x)^2} - \frac{2x}{(4-x)}$$

8.

$$\frac{3x^2}{(1-x)} + \frac{x^3+1}{(1-x)^2}$$

9.

$$\frac{3x^2(x^2-2)}{(5-x^3)^2} + \frac{2x}{(5-x^3)}$$

10.

$$-\frac{2x(3-x^4)}{(x^2+2)^2} - \frac{4x^3}{(x^2+2)}$$