



## Product Rule

## Quotient Rule

$$f(x) = (4x^2 - 5x)(2 + x)$$

1

2

3

4

5

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$h(x) = \sqrt{x}(3x^3 + x^2)$$

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$k(x) = 5x^3 \cos x$$

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$2x^2\sin x + 4x^3$$

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$f(x) = 3x^5 \cos x \sin x$$

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

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

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$y = \frac{x}{\sqrt{x} - 1}$$

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$f(x) = \frac{3 + \frac{1}{x^2}}{x + 4}$$

1

2

3

4

5







## Product Rule

## Quotient Rule

1

2

3

4

5

$$y = x \left( 1 - \frac{2}{x+1} \right)$$

1

2

3

4

5





## Product Rule

## Quotient Rule

1

2

3

4

5

$$m(x) = \frac{4x^2 + 8x^3}{5}$$

1

2

3

4

5



# Trigonometry Derivatives

1

$$\frac{d}{dx} [\sin x] = \cos x$$

$$\frac{d}{dx} [\cos x] = -\sin x$$

2

$$\frac{d}{dx} [\tan x] = \sec^2 x$$

$$\frac{d}{dx} [\cot x] = -\csc^2 x$$

3

$$\frac{d}{dx} [\csc x] = -\csc x \cot x$$

$$\frac{d}{dx} [\sec x] = \sec x \tan x$$

4



# Trigonometry Derivatives



1

$$f(x) = \sin x$$

$$h(x) = 5x^3 + \cos x$$

2

3



4



# Trigonometry Derivatives



1

$$y = \frac{\sec x}{x}$$

2

3



4



# Trigonometry Derivatives



1

$$f(x) = x^3 \csc x$$

2

3



4



# Trigonometry Derivatives



1

$$h(x) = 5x^2 \sec x + \tan x$$

2

3



4

# H o m e w o r k

**p. 126 # 1-33 odd, 39-53odd,  
63-67odd, 73, 103-108**

