Product rule for derivative

y = *u v*

Find the derivative of each function

1) By multiplying and then taking the derivative.

2) By using the product rule.

Example: y = 5x2( 4x + 1)

Method 1. Method 2

y = 5x2( 4x + 1) y = 5x2( 4x + 1)

v = (4x + 1)

Find the derivative of each function

1) By multiplying and then taking the derivative.

2) By using the product rule.

1.

2.

The Quotient Rule

y =

Find the derivative of each using the quotient rule.

Example:

*u =* 3*x, v = x2 –* 5

Find the derivative of each using the quotient rule.

1.

2.