

Activity 9
July 2, 2002

Name:

Look at the function $f(x) + g(x)$.

Using the formal definition of derivative, write out $\frac{d}{dx}[f(x) + g(x)]$.

In the numerator, group together the f 's and g 's.

Separate this limit into two separate limits, one with f and one with g .

What are each of these limits?

Congratulations! You have just derived the sum rule for derivatives.

Now, try to do the same for $\frac{d}{dx}[cf(x)]$.