Chapter 9 Combinations of Functions

Recall:

From Sec 1.7

You can add, subtract or multiply functions.

$f(x)$

$g(x)$

$f+g$

$f-g$

fg

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Ex:

Click to show graphs

Given $f(x)=3x+4$

$g(x)=2x^2$

find: $f+g$ $f-g$ fg

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Let's look at some more complicated ones...

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

$g(x)=\sin 2x$ $g(x)=\frac{1}{x}$

$f + g$

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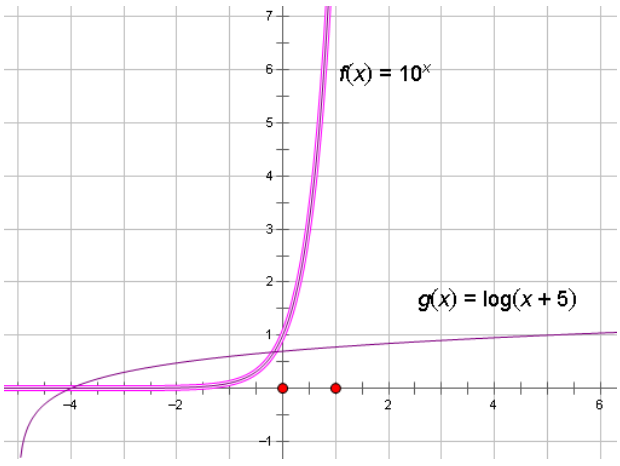
Note:
We need to remember to deal with domain and range carefully. If the original functions have any asymptotes and holes we need to watch for these as well.

Ex:

Determine the domain and range of (f-g)(x) and

(f+g)(x) if $f(x) = 10^x$ and $g(x)=\log(x+5)$



Domain:

Range:

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Homework

p529 #5, 7
p537 #1ce, 4aef

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Attachments

sum difference product of functions.gsp

sum of sinx and sin2x.gsp

x and 1overx.gsp