

Working with the Algebra of Functions



Name _____

Use the TI-83+/84+ graphing calculator to investigate the graphs of

$$(f + g)(x) ; (f - g)(x)$$

$$(f \cdot g)(x) ; (f / g)(x)$$

Remember: to enter Y_1 and Y_2

1. set cursor at " $Y_3 =$ "
2. VARS key \rightarrow Y-Vars
3. Choose Function – Enter
4. Make choice of Y_1, Y_2 – Enter

Given: $f(x) = x$ and $g(x) = \frac{1}{x}$, find and graph:

$Y_1 = x$
 $Y_2 = 1/x$

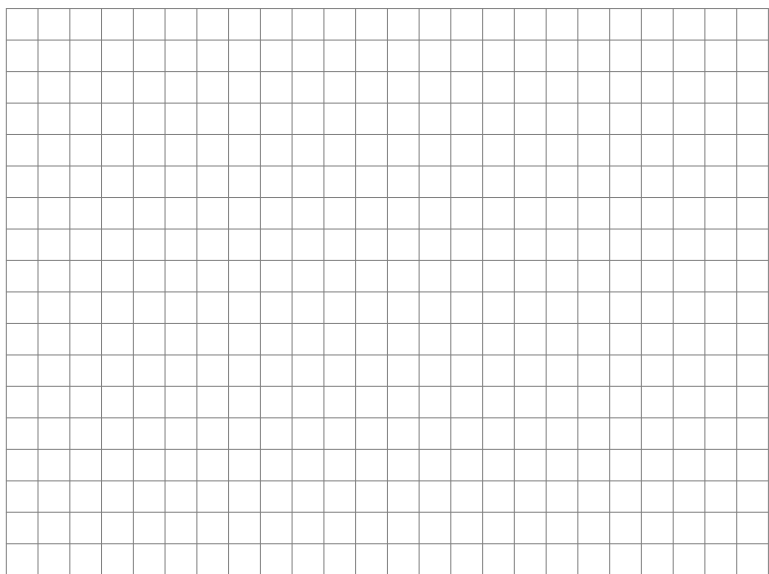
1. $(f + g)(x)$

○
○
○

$Y_3 = Y_1 + Y_2$

Algebraic answer:

Domain:



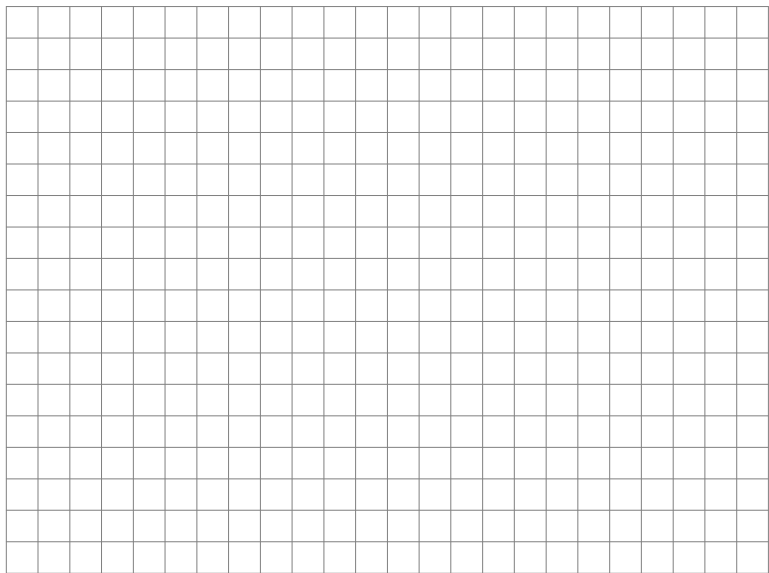
2. $(f \cdot g)(x)$

○
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$Y_3 = Y_1 Y_2$

Algebraic answer:

Domain:



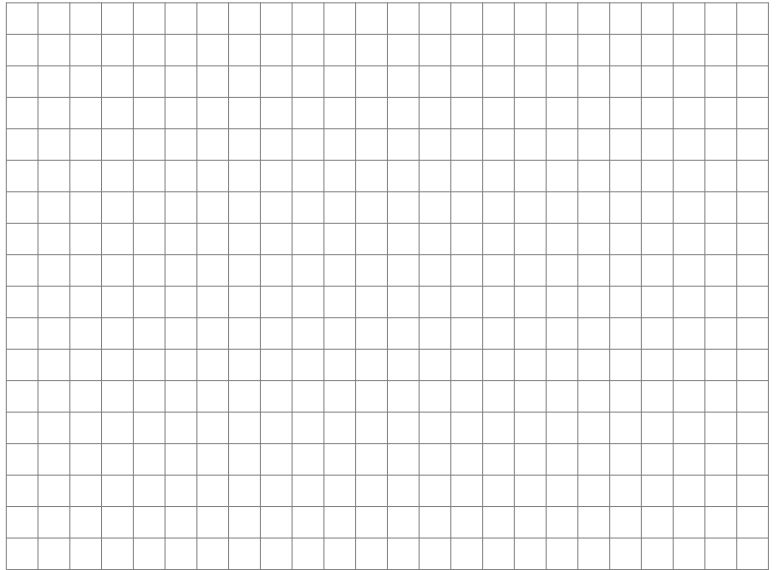
3. $(f - g)(x)$



$Y_3 = Y_1 - Y_2$

Algebraic answer:

Domain:



4. $(f / g)(x)$



$Y_3 = Y_1 / Y_2$

Algebraic answer:

Domain:

