MA 109: September 28

Transformations: Shifts, Scales, and Reflections

Start of Class

Instructor Information

Name:

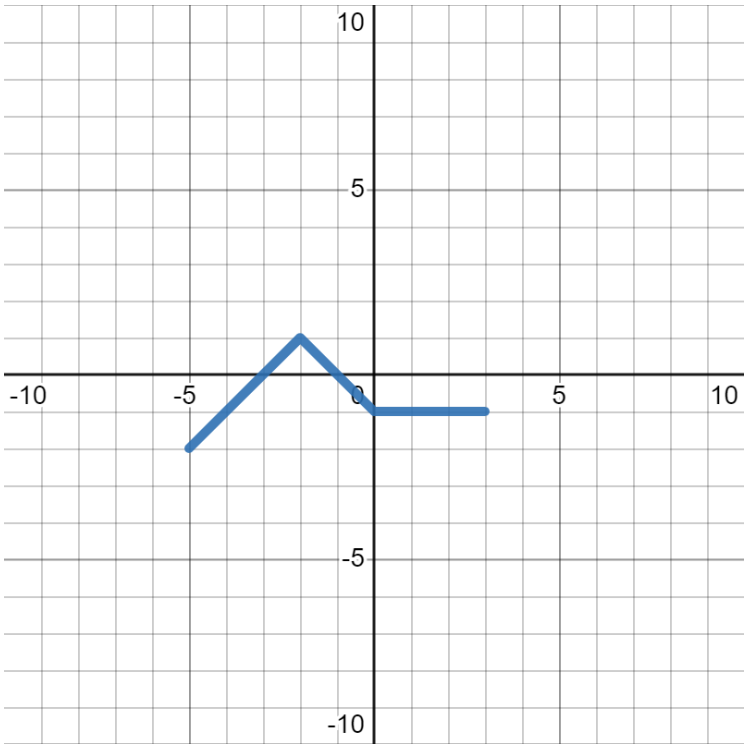
Email:

Office Hours:

Warm-up Questions

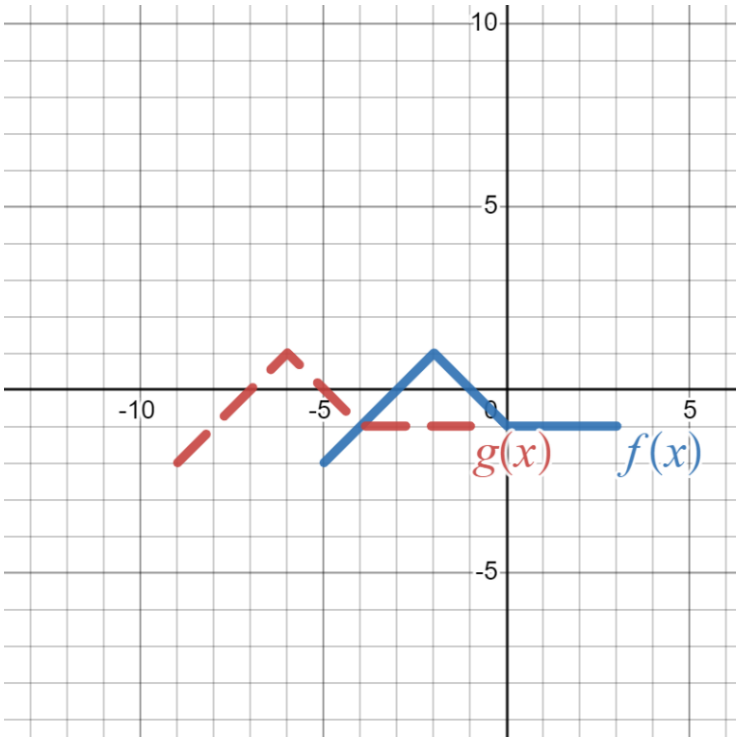
Notes

Example: Suppose $f(x)$ is given in the graph to the right. Draw the graph of $f(x)-4$.



Example: Suppose $f(x)$ and $g(x)$ are given in the graph to the right.

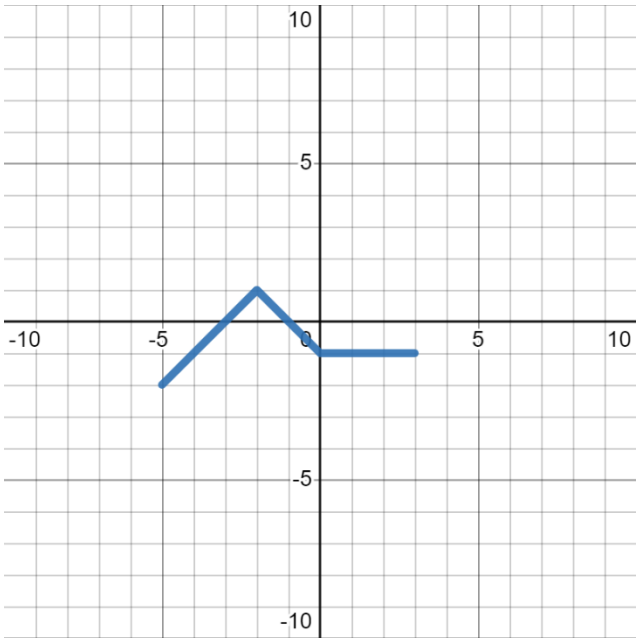
If $f(x)$ is our original function, write the formula for $g(x)$ in terms of $f(x)$.



Example: Suppose $f(x) = x^2 + 8x - 3$, and the graph of $g(x)$ is the same as that of $f(x)$, but shifted left by 7. Write the formula for $g(x)$.

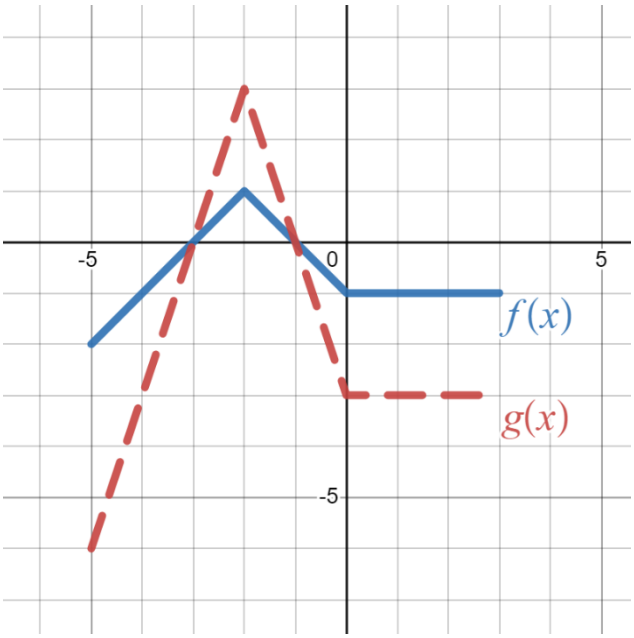
Example: Suppose $f(x) = 3x^2 + 4$ and $g(x) = 3x^2 - 1$. What transformation took $f(x)$ to $g(x)$?

Example: Suppose $f(x)$ is given in the graph to the right. Draw the graph of $f\left(\frac{1}{2}\,x\right)$.



Example: Suppose $f(x)$ and $g(x)$ are given in the graph to the right.

If $f(x)$ is the original function, write the formula for $g(x)$ in terms of $f(x)$.



Example: Suppose $f(x) = x^2 + 8x - 3$, and the graph of $g(x)$ is the same as that of $f(x)$, but flipped vertically over the x-axis. Write the formula for $g(x)$.

Example: Suppose $f(x) = 3x^2 + 4$ and $g(x) = \frac{3}{7}x^2 + \frac{4}{7}$. What transformation took $f(x)$ to $g(x)$?

End of Class

Write a summary of what you learned today:

What questions do you have about the material from today?

What do you need to do between now and the next class meeting?