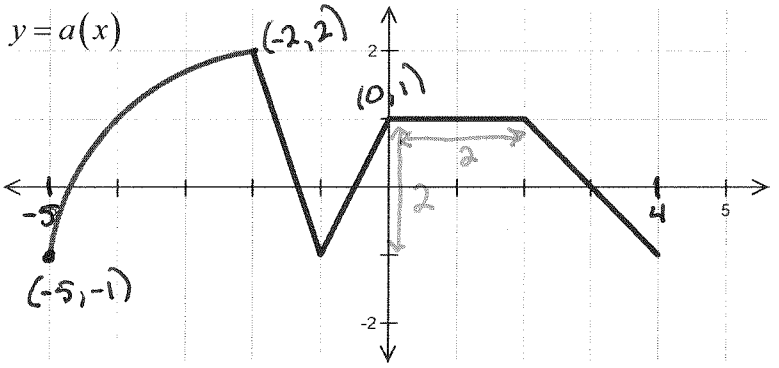
IB Math 1 5E Mixed Transformations Warm Up

Use the graph of the function a



Sketch the graphs of the functions.

1. $b(x) = -\frac{3}{2}a(2x+6)-1$ $= -\frac{3}{2}a\left(2(x+3)\right)-1$

Horizontal

Left 3

Di bafo $\frac{1}{2}$

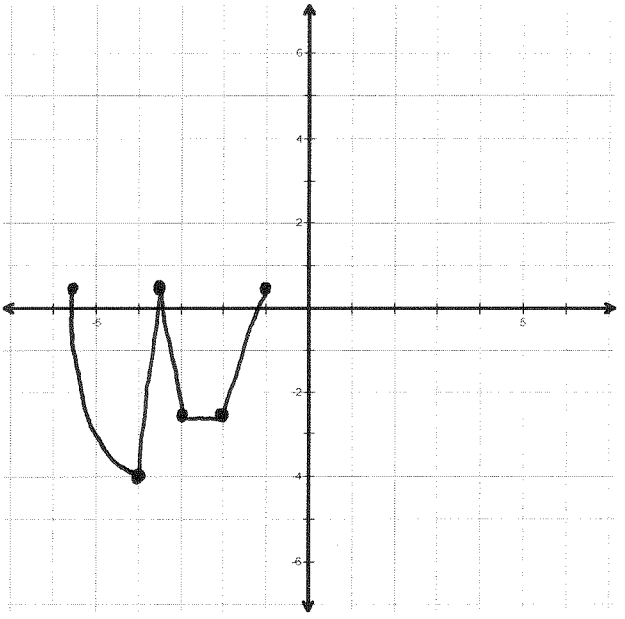
Vertical

Down 1

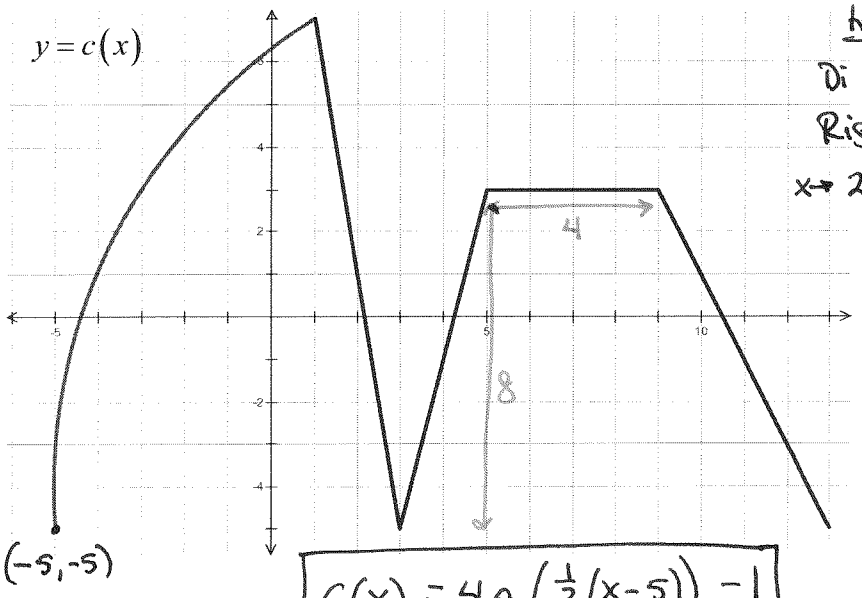
Di bafo $\frac{3}{2}$

Reflection over x-axis

$\frac{x}{2}-3$	x	y	$-\frac{3}{2}y-1$
$-\frac{11}{2}$	-5	-1	$\frac{1}{2}$
-4	-2	2	-4
$-\frac{7}{2}$	-1	-1	$\frac{1}{2}$
-3	0	1	$-\frac{5}{2}$
-2	2	1	$-\frac{5}{2}$
-1	4	-1	$\frac{1}{2}$



2. Write the equation for $c(x)$ in terms of a.



Horiz

Di bafo 2

Right 5

$x \to 2x + 5$

Vert

Di bafo 4

Down 1

$y \to 4y - 1$

(-5, -1)

$2(-5)+5$ $4(-1)+-1$

(-5, -5)

$C(x) = 4a\left(\frac{1}{2}(x-5)\right)-1$

HW 5E (2-8)