p 041 q13

IT SHOULD NOT BE 3 BUT RATHER 6.

a f(x)=1x1

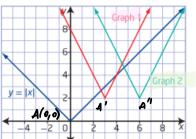
g(x)

let's call it

> I THINK THIS IS A TYPO **13.** Gil is asked to translate the graph of y = |x|according to the equation y = |2x - 6| + 2. He decides to do the horizontal translation of 3 units to the right first, then the stretch

about the y-axis by a factor of $\frac{1}{2}$, and lastly the translation of 2 units up. This gives him Graph 1. To check his work, he decides to apply the horizontal stretch about the y-axis by a factor of $\frac{1}{2}$ first, and then the horizontal translation of 6 units to the right and the vertical translation of 2 units up. This results in Graph 2.

- a) Explain why the two graphs are in different locations.
- b) How could Gil have rewritten the equation so that the order in which he did the transformations for Graph 2 resulted in the same position as Graph 1?



then: g(x)= 12x-61+2

= f(2x-6)+2.

Graph 1 stacked w/ the H. Shift, then followed w/ an H. stretch.

The formula that Graph, represents is

g(z)= f(2x-3)+2 at the bottom

H. stretch happens first

happens second by there are no brackets.

Graph 2 on the other hand represents: thirstep

g(x) = f(2(x-6)) + 2

Shift at 6

units to the

a factor of 1

Shift happens

	H. Stret	h by	Right happens	
	factor of	2	se wond-	
7.9	s applied	brackets.		
			nat 3, 17 C	
Let's compo	are the m	appings	ble not 3, it's atypo!	
Graph 1: g,	(2).	$(x,y) \supset ($	(X+6)2) y+2)	
Grapha: 91	(a); (a	(,y) -> (;	1×16, y+2)	
Let's see wi	hat happe	ns in each	Lage to a point A(0,0) He vertex	
from floor), for ex	c. the vertex	(A(0,0) He vertex	
g,(x); A(0,0,): ->	$(0+6)\frac{1}{2}$	the vertex $(3,2) \rightarrow as seen$ $(4) + 2 = (3,2) \rightarrow as seen$ (4) + 2 = (6,2) = A'' (5) + 6 = 4 (5) + 6 = 4 (5) + 6 = 4 (5) + 6 = 4 (6) + 2 = 4	
			- 7) Graph	
92(2): A (0,0	\rightarrow	0+6,0	1+2.=(6,2)=A	
		2 '	Com in french 2.	
			3667) 111 010/211 017	
why we h	ave dita	Essent DOS	is correct, which is	
Graph 2 84	asts w/	the stretch	n: it would then have	
to use l	srackets.	-		
g(d)=122				
0		/		
			(-6) has no bradeds	
		1120	de the parameters, i.e.	
			2x-6 should be	
	k	1	2(x)	
	(ové1)	·		
	M,			

no hear braker Make bradeets so u can see the stretch first, like so: f(2(2x-6))=f(2(x-3))H. Stretch first H, Shift 3 uni达 by a factor of to the Right brackets, it's no longer a

H. shift Right by 6 units, but rather by 3 units! This is why Graph 2 has been moved 3 units too far to the Right by Bunits too far at (6,2) instead of having the vestex a+(3,2)b) When we blond @ of (**) together, we get g(x)= f(2x-6)+2= f(2(x-3))+2 He has to rewrite the equation as / f(2(x-3)) +2 | or | y=/2/2-31/+2/

