

Unit 1 Day 3 WTT

1. Given $g(x)$ to the right:

a) State the domain of $g(x)$. $\{x | x \leq 8\}$

b) State the range of $g(x)$. $\{y | y \geq -5\}$

c) $g(-7) = -1$ $g(0) = 0$

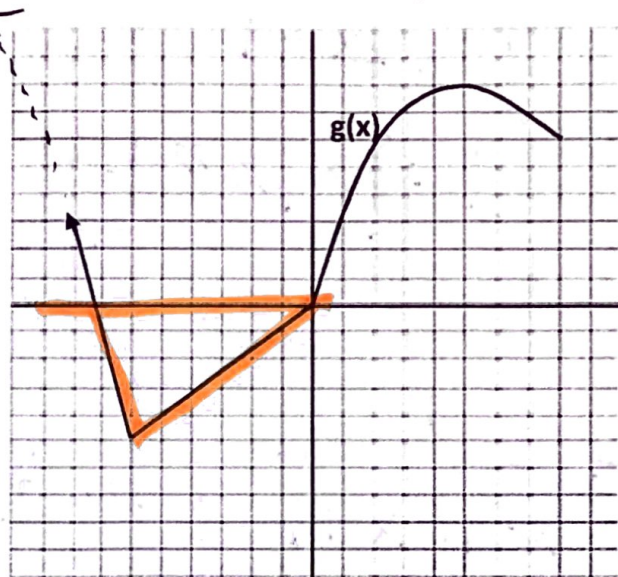
d) $g(5) = 8$ $g(-6) = -5$

e) $g(2) + g(-4) = 3$

f) For what values is $g(x) \leq 0$? You may approximate here.

g) $g(1)$ and $g(-8) = 3$

h) Is $g(x)$ a one to one function? no



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2 x-values give same y-value

ROOTS? (0,0) (-7.3, 0)

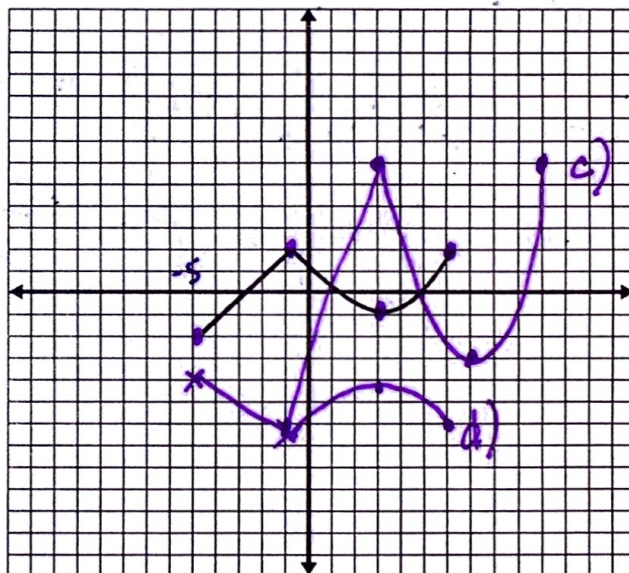
Explain why or why not.

2. Given $h(x)$ to the right:

a) State the domain of $h(x)$? $\{x | -5 \leq x \leq 6\}$

b) State the range of $h(x)$? $\{y | -2 \leq y \leq 2\}$

c) State the steps needed to graph $3h(x-4)$
vert. stretch by 3, right 4



Next graph it.

What is the domain of this "child" of $h(x)$?

$\{x | -1 \leq x \leq 10\}$

What is the range of this "child" of $h(x)$?

$\{y | -6 \leq y \leq 6\}$

d) State the steps needed to graph $-\frac{1}{2}h(x)-5$

reflect over x-axis
vert. comp. 1/2, down 5

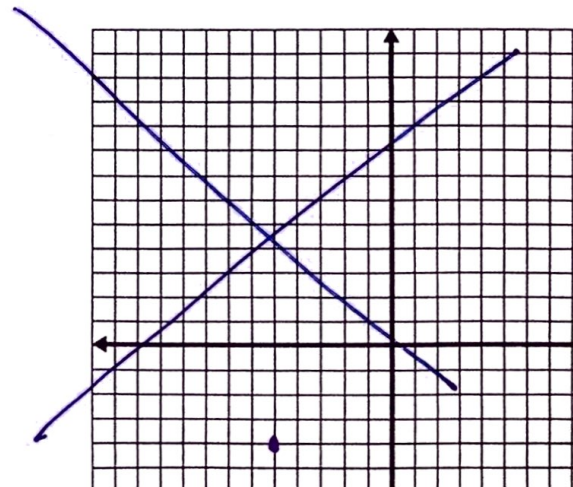
Next graph it on the second graph.

What is the domain of this "child" of $h(x)$?

$\{x | -5 \leq x \leq 6\}$

What is the range of this "child" of $h(x)$?

$\{y | -6 \leq y \leq -4\}$



mult. b) by 3

-add 4 to a)

no horiz. comp. shift

Unit 1, Day 3 "Fred" Guided Practice: Using Freddie Function, $f(x)$ below, list the steps needed to graph the function given graph. Then graph.

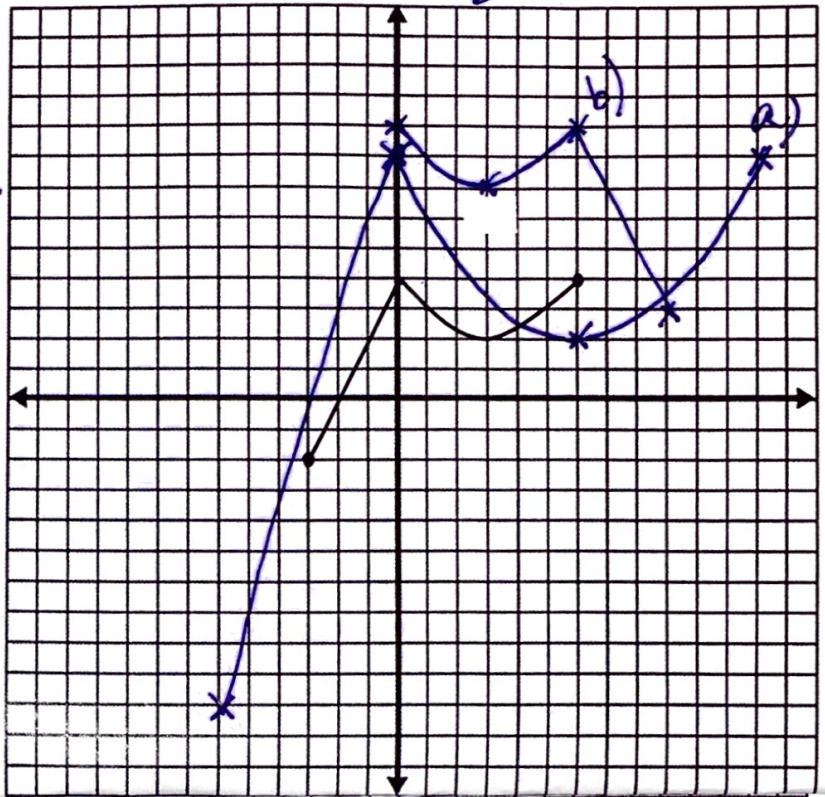
$f\left(\frac{1}{b}(x)\right)$ → multiple inside rep. horiz. stretch | comp.
 flip b
 if $\frac{1}{b} > 1$ horiz. stretch
 if $\frac{1}{b} < 1$ horiz. comp.

a) $3f\left(\frac{x}{2}\right) - 4$

REWRITE: $3f\left(\frac{1}{2}(x)\right) - 4$
 vert. stretch by 3
 horizontal stretch by 2
 ($\frac{1}{2} \rightarrow$ flip = 2) →
 down 4

b) $f(-x+6) + 5$

$f(-(x-b)) + 5$
 reflection over y-axis
 right b
 up 5



Now Practice the next two on your own.

c) $-f\left(\frac{2x-6}{2}\right)$

REWRITE: $-f(2(x-3))$

reflect over x-axis
 $2 \rightarrow$ flip! $\rightarrow \frac{1}{2} < 1$
 horizontal compression of $\frac{1}{2}$
 RIGHT 3

d) $f\left(\frac{1}{2}(x+3)\right)$

REWRITE: $f\left(\frac{1}{2}(x+b)\right)$
 $\frac{1}{2} \rightarrow$ flip $\rightarrow 2 > 1$ horizontal stretch by 2
 LEFT b

