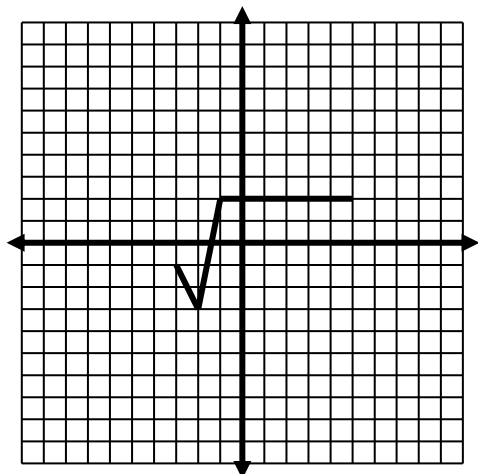


# Transformations with Fred – Day 1 HW

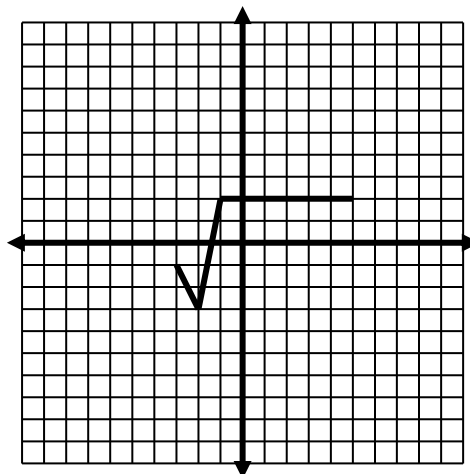
Name \_\_\_\_\_

I. On each grid, **Ginger, G(x)** is graphed. Graph the given function.

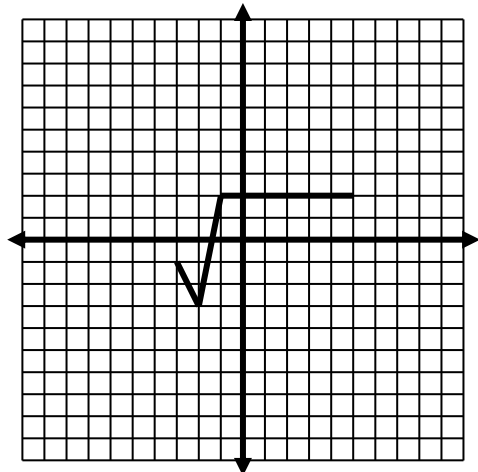
1. Graph:  $y = G(x) - 6$ .



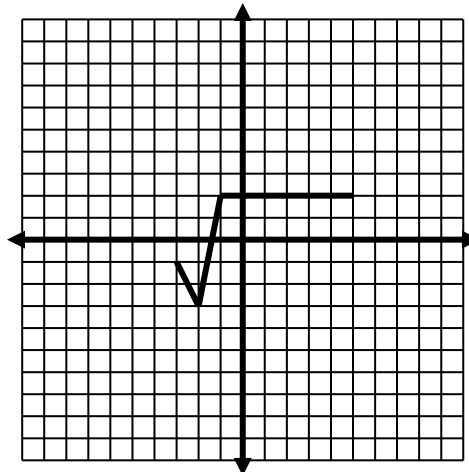
3. Graph:  $y = G(x + 2) + 5$



2. Graph:  $y = G(x + 6)$



4. Graph:  $y = G(x - 4) - 5$



II. Using the understanding you have gained so far, describe the effect to Fred for the following functions.

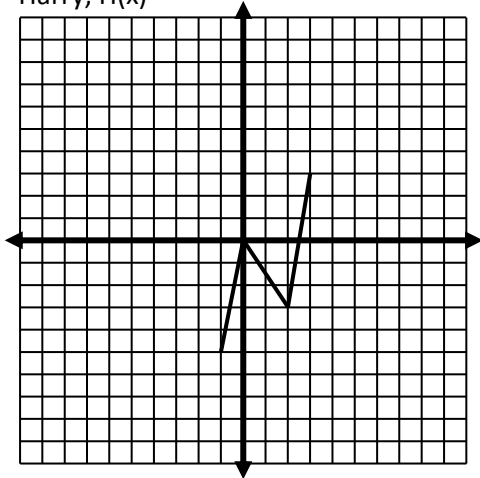
Equation	Effect to Fred's graph
1. $y = F(x) + 82$	
2. $y = F(x - 13)$	
3. $y = F(x + 9)$	
4. $y = F(x) - 55$	
5. $y = F(x - 25) + 11$	

III. Using the understanding you have gained so far, write the equation that would have the following effect on Fred's graph.

Equation	Effect to Fred's graph
1.	Translate left 51 units
2.	Translate down 76
3.	Translate right 31
4.	Translate right 8 and down 54
5.	Translate down 12 and left 100

IV. Determine the domain and range of each parent function.

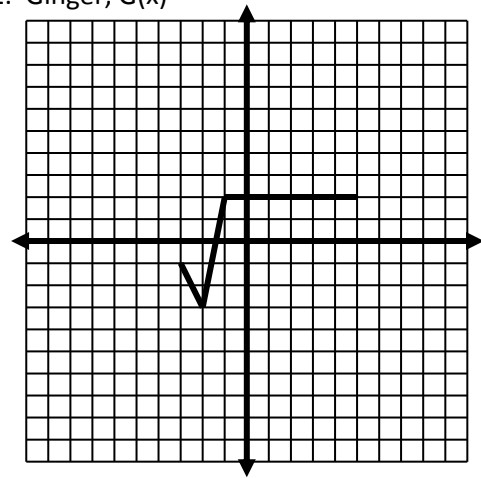
1. Harry,  $H(x)$



Domain: \_\_\_\_\_

Range: \_\_\_\_\_

2. Ginger,  $G(x)$



Domain: \_\_\_\_\_

Range: \_\_\_\_\_

V. Consider a new function, Polly,  $P(x)$ .

Polly's Domain is  $\{x \mid -2 \leq x \leq 2\}$ . Its range is  $\{y \mid -3 \leq y \leq 1\}$ .

Use your understanding of transformations of functions to determine the domain and range of each of the following functions. (Hint: You may want to write the effect to Polly first.)

1.  $P(x) + 5$

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

2.  $P(x + 5)$

Domain: \_\_\_\_\_

Range: \_\_\_\_\_