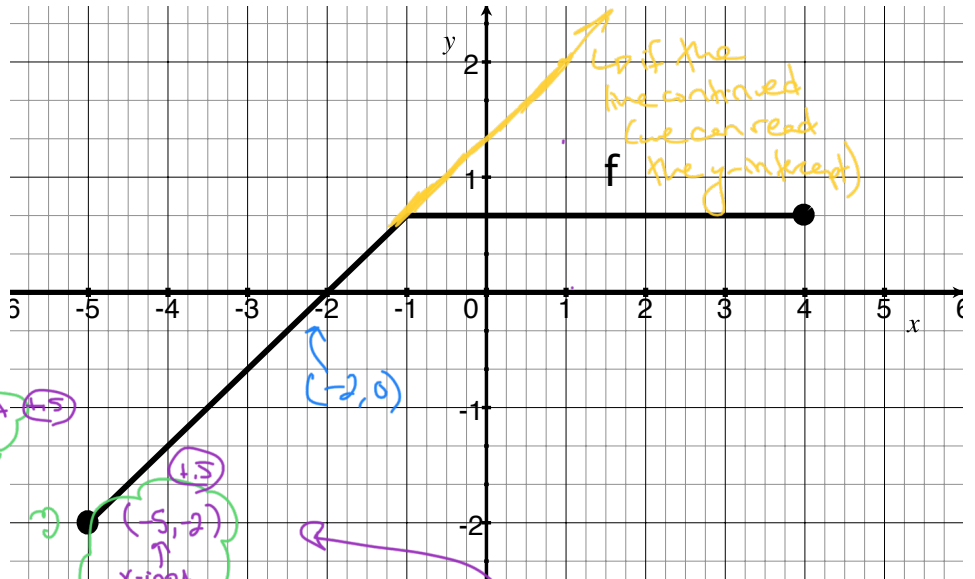


# Quiz 0

Show *all* your work. Reasonable supporting work must be shown for any partial credit.  
Name(s):

1. Consider the graph of  $f$  shown on the right.



(+1)

(a) [1] Is  $(-2, -5)$  on the graph of  $f$ ?

$x \downarrow$   
 $y \downarrow$   
No  
off the graph even?

(b) [1] Estimate  $f(-5)$ .

-2

x-input -5  
y-output

(c) [1] Find the coordinates where  $f$  is at a minimum.

minimum is where y-coord or output is lowest @  $x = -5$  and  $y = -2$

(d) [4] Find the piece-wise defined algebraic rule for the function  $f$  of the form:

$$f(x) = \begin{cases} \frac{2}{3}x + \frac{4}{3} & -5 \leq x \leq -1 \\ \frac{2}{3} & -1 < x \leq 4 \end{cases}$$

between -5 and -1  
line so  $y = mx + b$   
slope =  $\frac{\text{rise}}{\text{run}} = \frac{0 - -2}{-2 - -5} = \frac{2}{3}$   
thru  $(-2, 0)$  so  $0 = \frac{2}{3}(-2) + b$   
 $\Rightarrow 0 = -\frac{4}{3} + b$   
 $\Rightarrow \frac{4}{3} = b$

between -1 and 4  
horizontal line  $\Rightarrow m = 0$   
when our line  $\frac{2}{3}x + \frac{4}{3}$  has  $x = -1$   
so  $\frac{2}{3}(-1) + \frac{4}{3} = -\frac{2}{3} + \frac{4}{3} = \frac{2}{3}$   
 $\Rightarrow y = \frac{2}{3}$

2. [3] Create a function whose domain is all UWT students. Evaluate this function on yourself.

So many correct answers here?  
defined well/sense  
start

each input has 1 output  
evaluated on self