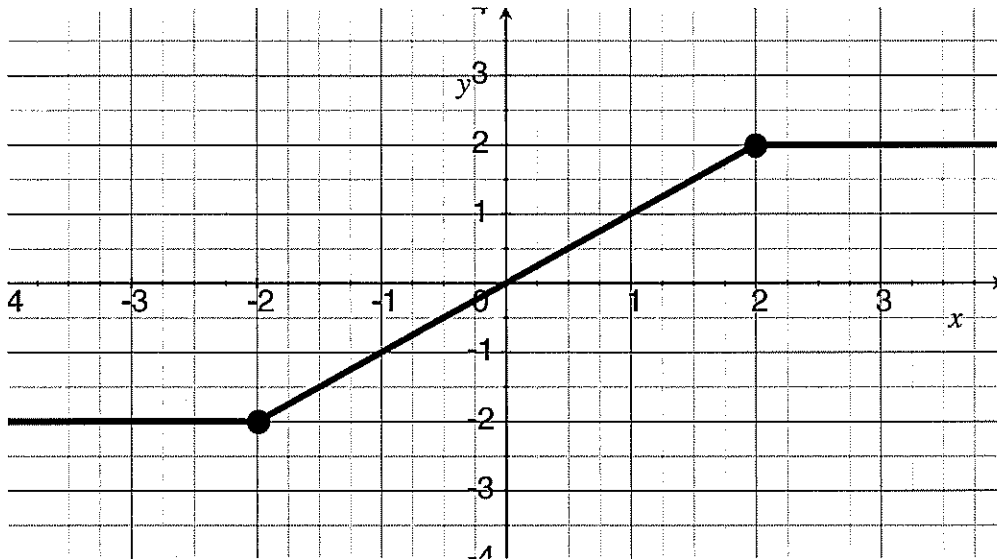


# Quiz 1E

Key

Show *all* your work. No credit is given without reasonable supporting work. There are *two* sides to this quiz.

1. (§2.2 #53) The graph of the piecewise defined function  $f$  is shown below:



- (a) [1] Find  $f(-3.5)$ .

-2

- (b) [1] What is the domain of  $f$ ?

$[-4, 4]$

technically

endpts (1.5)

bounds (1.5)

b/c I forgot the arrows, but I'd

take

$(-\infty, \infty)$

- (c) [3] Find a formula for the function  $f$  in the indicated form:

$$f(x) = \begin{cases} -2 & \text{if } x < -2 \\ x & \text{if } -2 \leq x \leq 2 \\ 2 & \text{if } 2 < x \end{cases}$$

(1.5)

(1.5)

(1.5)

function (1.5)

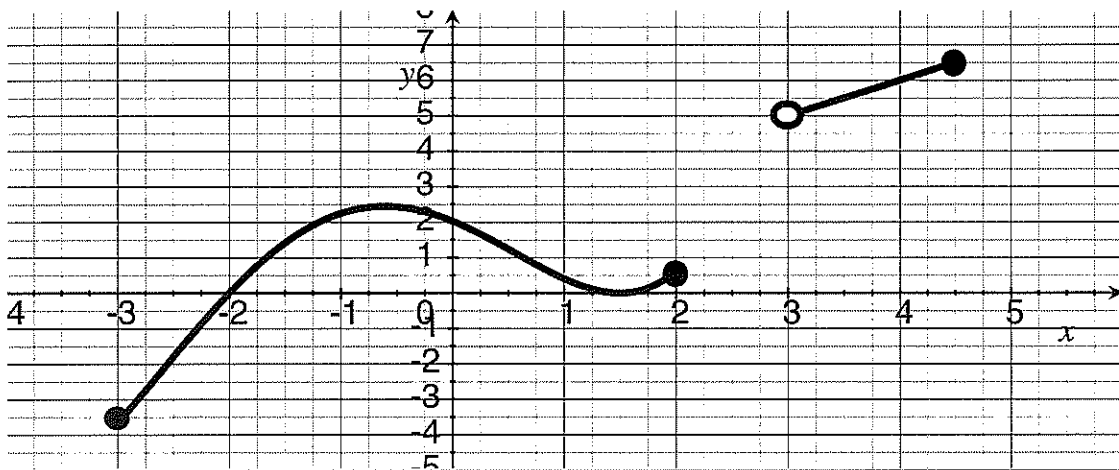
notation (1.5)

2. (9/28 Worksheet) [2] Given that  $g(x) = \frac{1}{x^2 - 1}$ , find  $g(a+h)$ .

$$g(a+h) = \frac{1}{(a+h)^2 - 1}$$

composition +5  
pt in a+h +1

3. Use the the graph of  $C$  shown below to answer the following questions:



(a) (WebHW1 #6) [1] Estimate the number  $x$  in the domain of  $C$  so that  $C(x)$  is as large as possible.

4.5

(b) (WebHW1 #7)[2] What is the range of  $C$ ?

$[-3.5, 0.5] \cup (5, 6.5]$

partition +5  
range is +5  
bracket/parenthesis +5  
and this +5