

Quiz 2

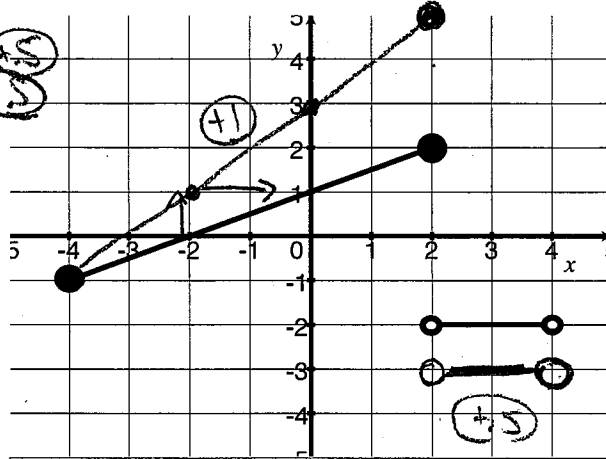
Key

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

1. Let f be the graph below and to the right.

(a) [1] (GraphWks #5) ^{Xvel +.5}
Find the domain of f . ^{gab +.5}

$[-4, 4)$ or $4 \leq x < 4$
 $[-4, 2] \cup (2, 4)$ or $-4 \leq x \leq 2$ and $2 < x < 4$



(b) [3] (WebHW4 #13)
Write an equation for the function

$$f(x) = \begin{cases} \frac{1}{2}x + 1 \\ -2 \end{cases}$$

if $-4 \leq x \leq 2$
if $2 < x < 4$

line w/ pos. slope

Slope = $\frac{\text{rise}}{\text{run}} = \frac{1}{2}$ (+.5)

y-intercept @ 1 (+.5)

$\Rightarrow y = \frac{1}{2}x + 1$ (+.5) ^{looking for line (+.5)}

horiz line

$y = -2$ (+1)

(c) [3] (§1.5 #16) Graph $2f(x) + 1$.

(+.5) \downarrow vert. stretch by 2
i.e. mult y coord by 2
(+.5) \downarrow shift up by 1
order (+.5)

2. (WebHW4 #16) It costs a \$20 flat fee to rent a power drill, plus \$4 a day starting with the first day.

(a) [2] Write a function that represents the total charge as a function of days.

$$y = 20 + 4x$$

(+15) (+15)

line (+15)
start (+15)

(b) [1] Define any variables you used above. (i.e. if you used x , say what x means.)

y = total charge (+15)
 x = # of days (+15)