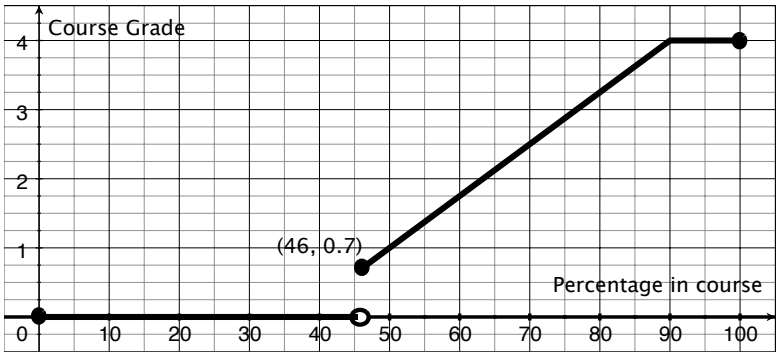
Quiz 1

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

1. Consider the following graph of G.



(a) [1] (§2.2 #26c) Estimate x so that $G(x) = 3.0$.

(b) [2] (§2.2 #23b) Find the range of G.

(c) [2] (§2.2 #53) Find a formula for the function G in the indicated form.

$$G(x) = \begin{cases} & \text{if } 0 \leq x < 46 \\ & \text{if } 46 \leq x < 90 \\ & \text{if } 90 \leq x \leq 100 \end{cases}$$

2. (§2.1 #32) Let $f(x) = \frac{1}{x+1}$. Find the following:

(a) [1] $f(3)$

(b) [2] $f(3+h)$

(c) [2] Use the above work to find the *difference question of f at 3*, that is find:

$$\frac{f(3+h) - f(3)}{h}$$

and simplify.