# Quiz 1

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

1. [2] Let $a$ and $b$ be non-zero numbers. Add and then simplify:

$$\frac{b}{a} + \frac{2}{\frac{1}{b}}$$

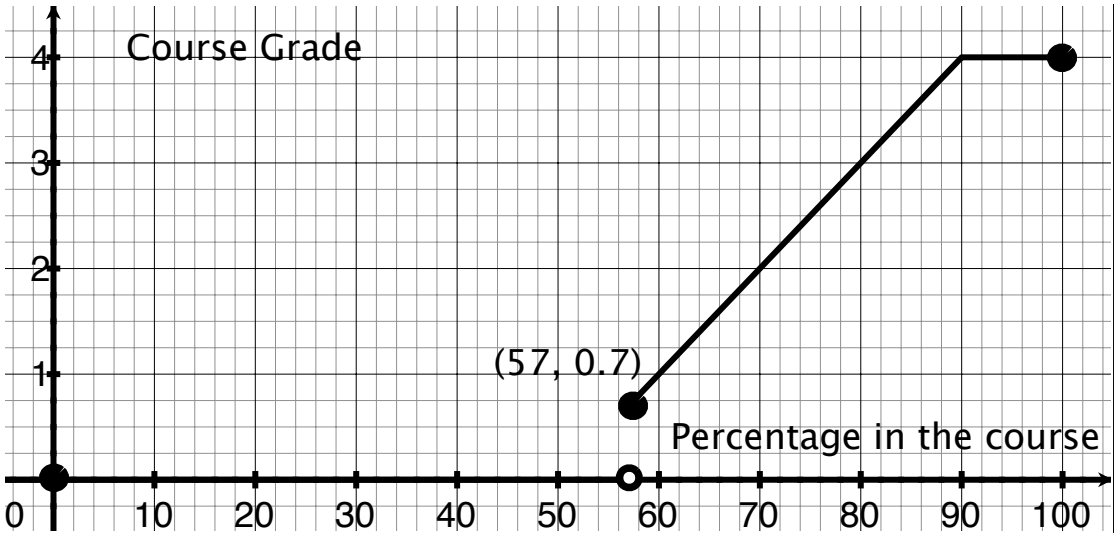
2. Let $f(x) = \dfrac{x+4}{x^2-9}$.

   (a) [1] (§1.3 #32) Find $f(0)$.

   (b) [2] (WebHW1 #5) Find $f(2+k)$.

   (c) [1] (WebHW1 #9) Use the domain convention to find the domain of $f$?

3. Let $f$ be the piecewise defined graph shown below that takes as inputs your percentage in the course and returns your grade on a 4. scale:




(a) [1] (§1.3 #14) Is $f$ a function? Why or why not?

(b) [1] (§1.1 #30) Is the point $(3, 80)$ on the graph of $f$?

(c) [1] (§1.3 #56) *Estimate* $f(75)$.

(d) [1] *Estimate* the course percentage needed to earn a 2.0 in the class.