Quiz 0.2 Practice Solutions

1. How many times is the + procedure applied in the following snippets of code?

(if (= 3 (+ 1 2))

(+ 4 5)

(+ 6 7)) \_\_\_\_\_2\_\_\_\_\_ times

(new-if (= 3 (+ 1 2))

(+ 4 5)

(+ 6 7)) \_\_\_\_3\_\_\_\_\_ times

1. Write a function num-sent that takes in a two-digit number and returns a sentence of the digits. Assume you have a function number-to-word that converts a number to an English word (for example, 4 -> four).

> (num-sent 42)

(four two)

> (num-sent 03)

(zero three)

(define (num-sent num)

(sentence (number-to-word (first num))

(number-to-word (last num))))

1. What will Scheme print? Assume the lines are typed into the interpreter one after another. If Scheme will error, write “Error”.

> (define (g x) (se 'hello x))

> (g 'satish)

\_\_\_\_(hello satish)\_\_\_\_\_\_\_\_\_

> (define (f y) (se ‘bye y))

> (f (g ‘andrew))

\_\_\_\_\_(bye hello andrew)\_\_\_\_\_\_\_

> (g (f x))

\_\_ERROR\_\_\_\_\_\_\_\_\_\_\_\_