CS-241 Midterm Exam Review Winter, 2011-2

1. Write a function which reverses a string (e.g. "Don't get sick" becomes "kcis teg t'noD").

2. Write a function that takes in a string and returns a string that reverses the letters in each word, but keeps the word ordering the same. (e.g. reverse_words("I wear a Stetson now – Stetsons are cool") returns "I raew a nostetS won – snostetS era looc"). You may use the function reverse() from question #**??** in your solution.

3. Write a function that takes in a file name, and returns the average size of a word eg. a file containing:

   lots of work
   no rest for midterms
   sad for you

   has an average length of: 3.6

4. Perform a substitution trace on

```
1    reverse('Cinco-fone')
```

5. Write a function that takes in a list of numbers and returns the sum of all of those numbers.

   (a) Recursively.

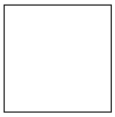
   (b) Iteratively

6. How would you test this function?

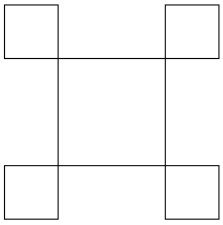
7. Assuming the turtle is facing east, write the python code to draw the following picture given the proper depth as input:

   - depth = 0
     No output

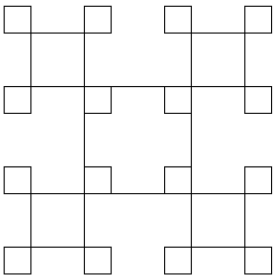
- depth = 1



- depth = 2



- depth = 3



8. What does the following evaluate to?

```
1 def writeThatDown( n ):
2     if n < 5:
```

```
3           return n
4       return (2 * n)
5
6   def he( n ):
7       temp = n + 180
8       if temp > 185:
9           return temp
10      return n
11
12  def putstheFernback( n ):
13      return -n
14
15  n = 20
16  n = he(putstheFernback(writeThatDown( n ) ) )
17  print( n )
```