Recursion:

1. What does the following code calculate:

```
# Assume that n is greater than or equal to 1 */

def fun1(n):
     if(n == 1) :
          return 0
     else :
          return 1 + fun1(n//2)
```

2. What does the following code calculate:

```
def fun2(x, y) :
     if (x == 0) :
          return y
     else :
          return fun2(x - 1, x + y)
```

3. Write a recursive code which prints a given positive integer in base 3.

4. Write a recursive function which checks if a string is a palindrome.

5. Write a recursive function which adds 0 after every odd digit in a given positive integer.