

## 1) (5 pts) DSN (Recursive Coding)

Write a recursive function that returns the number of bits set to 1 in the binary representation of its input parameter,  $n$ . For example `numBitsOn(17)` should return 2, since 17 in binary is 10001. **(Note: In order to receive full credit, your function's run time must be  $O(b)$ , where  $b$  is the total number of bits in  $n$ . Since this isn't the bitwise operator question, you don't HAVE to use bitwise operators for full credit, but that's probably the most natural route to the solution.)**

```
int numBitsOn(int n) {
```

```
}
```