Quiz 1

```
Algorithm  quiz1(n)
        int r1
        if (n == 1)
                r1 = 12
        else
                r1 = n + quiz1(n/2)
        end if
        return (r1)
end quiz1
```

quiz1(32) = ?

16
↑
1
↑

$$r1 = 32 + \frac{32}{2} + \frac{32}{4} + \frac{32}{8} + \frac{32}{16} + \frac{32}{32}$$

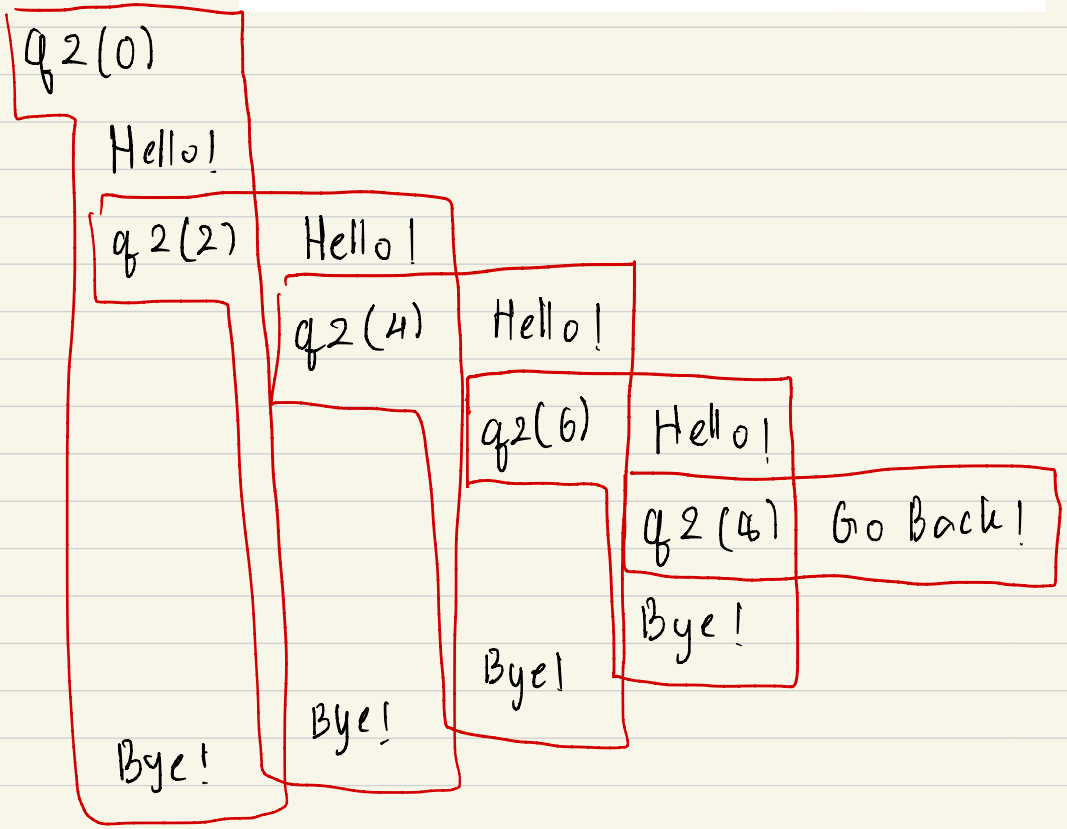
$$= 32 + 16 + 8 + 4 + 2 + 12$$

$$= 74 \#$$

Quiz 2

```
Algorithm quiz2(n)
    if (n==8)
            println("Go Back!")
    else
            println( n + " Hello!")
            quiz2(n+2)
            println( n + "Bye!")
    end if
end quiz2
```

quiz2(0) = ?



Quiz 3

```
Algorithm quiz3(x)
    if (x<5)
        return (3*x)
    else
        return (2*quiz3(x-5)+7)
    end if
    println("Finish!!")
    return 1
end quiz3
```

quiz3(4) = ?
quiz3(10) = ?
quiz3(17) = ?

$q3(4) \rightarrow 3*4 = 12$ #

$q3(10) \rightarrow 2(q3(5))+7$

$\rightarrow 2(2(q3(0)+7)+7$

$\rightarrow 2(2(3*0)+7)+7$

$= 2(0+7)+7$

$= 14+7 = 21$ #

$q3(17) \rightarrow 2(q3(12))+7$

$\rightarrow 2(2(q3(7))+7)+7$

$\rightarrow 2(2(2(q3(2))+7)+7)+7$

$\rightarrow 2(2(2(6)+7)+7)+7$

$= 2(2(14)+7)+7$

$= 2(45)+7 = 97$ #