Quiz 1

Deadline	Friday, 12 June 2020 at 11:59PM
Latest Submission	Monday, 08 June 2020 at 11:55PM
Raw Mark	4.00/4.00 (100.00%)
Late Penalty	N/A
Final Mark	4.00/4.00 (100.00%)

Question 1 (1 mark)

The following function aims to compute x^n :

```
long pow(int x, uint n)
{
   long raised = x;
   for (int i = 0; i <= n; i++) raised *= i;
   return raised;
}
```

What does it actually return?

(a) ◉	Always 0
(b) ○	Always 1

(c) ○	x^{n-1}
(d) ○	x^{n}
(e) ○	x^{n+1}
(f) ○	A random number

✔ Your response was correct.
Mark: 1.00

Question 2 (1 mark)

How many times will the for-loop condition (`i <= n`) be checked in this function?

```
long factorial(int n)
{
   long product = 1;
   for (int i = 1; i <= n; i++)
      product *= i;
   return product;
}
```

(a) ○	Once
(b) ○	*n-1* times
(c) ○	*n* times

(d) ◉	*n+1* times
(e) ○	*n!* times
(f) ○	None of the above

✔ Your response was correct.
Mark: 1.00

Question 3 (1 mark)

Consider the following function:

```
int myFunction(int n)
{
   int i = 0;
   while (n > 0) {
      i++;
      n = n/2;
   }
   return i;
}
```

What value is returned from the function call myFunction(100) ?

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✔ Your response was correct.
Mark: 1.00

Question 4 (1 mark)

Arrange these algorithm complexity values in order from *best* to *worst*.

Best = the one you'd most like to achieve. Worst = the one you'd most like to avoid.

Note: (x^y) means x^y.

- O(1)
- O(log n)
- O(n)
- O(n^2)
- O(2^n)

✔ Your response was correct.
Mark: 1.00