CSE680 Homework 2
Due Wednesday, April 15 by class time

Give the asymptotic running time of the following algorithms in Θ notation. Give your solution in the simplest terms possible. Show how you get the answer.

1.
```
function func1(n)
    s ← 0;
    for i ← 1 to n^2 do
        for j ← 1 to i do
            s ← s + j − i;
    return(s);
```

2.
```
function func2(n)
    s ← 0;
    for i ← 1 to n^2 do
        j ← 1;
        while j < i do
            j ← j × 2;
            s ← s + j − i;
    return(s);
```

3.
```
function func3(n)
    s ← 0;
    for i ← 1 to n do
        for j ← i to i + 680 do
            for k ← 1 to j do
                s ← s + j − i + 2k;
    return(s);
```

4.
```
function func4(n)
    s ← 0;
    i ← 1;
    while i < n^2 do
        j ← 1;
        while j < i do
            j ← j + 1;
            s ← s + i − j;
        i ← i × 2;
    return(s);
```

5.
```
function func5(n)
    s ← 0;
    for i ← 1 to n^2 do
        j ← 1;
        while j ≤ n do
            s ← s + i − j;
            j ← j + i;
    return(s);
```