

```
typedef double XFLOAT;
typedef double OTA_FLOAT;

using namespace std;

unsigned int gcd(unsigned int const &a, unsigned int const &b)
{
    int larger = max(a, b);
    int smaller = min(a, b);
    int gcdTest = smaller;
    int rest = 0;

    if (a == b)
        return a;
    if (a == 0 || b == 0)
        return -1;

    while (gcdTest > 0)
    {
        rest = larger % gcdTest;
        if (rest == 0)
            if (smaller % gcdTest == 0)
                return gcdTest;
            else
                gcdTest = smaller % gcdTest;
        else
            gcdTest = rest;
    }

    return -1;
}

int NextHigherPow2(int x)
{
    x--;
    for (int i=1; i<sizeof(int)*8; i=i*2)
        x = x | x >> i;
    return x+1;
}

int CalcExponent(int number)
{
    int exp, temprez;

    temprez = number;
    exp = 0;
    while( temprez != 1)
    {
        temprez = temprez/2;
        ++exp;
    }

    return exp;
}
```