

```
int main()
{
    int exp = 2;
    int num = 1;
    int n;

    while ( exp <= n )
    {
        num = num * 2;
        exp = exp2;
    }

    return BS ( num / 2, num, sqrt(exp), exp);
}

int BS( int lo, int hi, int loex, int hiex)
{
    int mid;
    int midex;

    if ( lo == hi )
    {
        return hi;
    }

    mid = ( lo + hi ) / 2;
    midex = sqrt( loex * hiex );

    if ( midex <= n )
    {
        return BS ( mid, hi, midex, hiex);
    }
    else
    {
        return BS ( lo, mid, loex, midex);
    }
}
```