

**1) Sortieren durch Einfügen**

```
#include <iostream>
#include <stdlib.h>
#include <time.h>

int main()
{
    const int n = 10;
    int a[n], x, j;

    srand((unsigned)time(NULL));

    for(int i = 0; i < n; ++i)
        a[i] = rand();

    std::cout << "array : ";
    for(int i = 0; i < n; ++i)
        std::cout << a[i] << " ";
    std::cout << std::endl;

    for(int i = 1; i < n; ++i)
    {
        x = a[i];
        for(j = i; j > 0 && a[j-1] > x; --j)
            a[j] = a[j-1];
        a[j] = x;
    }

    std::cout << "sorted: ";
    for(int i = 0; i < n; ++i)
        std::cout << a[i] << " ";
    std::cout << std::endl;

    return 0;
}
```

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## 2) Primzahlen

```
#include <iostream>
#include <stdlib.h>

int main()
{
    const int n = 1001;
    const int m = 31;
    int a[n];

    for(int i = 0; i < n; ++i)
        a[i] = i;

    for(int i = 2; i <= m; ++i)
        if(a[i] != 0)
            for(int j = i*i; j < n; j += i)
                a[j] = 0;

    std::cout << "prime numbers: ";
    for(int i = 0; i < n; ++i)
        if(a[i] != 0)
            std::cout << a[i] << " ";
    std::cout << std::endl;

    return 0;
}
```