


```

runner% cat graph.c
/* Bar graph of a function. */
/* Neal R. Wagner, Oct 9, 1996 */
#include <stdio.h>
#include <math.h>

double f(double);
void chars(int, char);

void main(void)
{
    double x, y; /* x and y coords on graph */
    double a, b; /* let x go from a to b */
    double h; /* in steps of h */
    scanf("%lf %lf %lf", &a, &b, &h);
    for (x = a; x <= b; x = x + h) {
        printf("%5.2f|", x);
        y = f(x);
        chars((int)(2.0/h)*y, ' ');
        printf("\n");
    }
}

/* f: the function to graph */
double f(double x)
{
    return sin(x);
}

/* chars: print character ch n times */
void chars(int n, char ch)
{
    int i;
    for (i = 0; i < n; i++)
        printf("%c", ch);
}

runner% lint -m -u graph.c -lm
function returns value which is always ignored
printf scanf
runner% cc -o graph graph.c -lm

```

```

runner% ./graph
0.0 3.14159 0.1
0.00 *
0.10 ***
0.20 *****
0.30 *****
0.40 *****
0.50 *****
0.60 *****
0.70 *****
0.80 *****
0.90 *****
1.00 *****
1.10 *****
1.20 *****
1.30 *****
1.40 *****
1.50 *****
1.60 *****
1.70 *****
1.80 *****
1.90 *****
2.00 *****
2.10 *****
2.20 *****
2.30 *****
2.40 *****
2.50 *****
2.60 *****
2.70 *****
2.80 *****
2.90 *****
3.00 **
3.10 *

Next, use double f(double x){ return 2 - x*x;}
runner% ./graph
0.0 1.414 0.1
0.00 *****
0.10 *****
0.20 *****
0.30 *****
0.40 *****
0.50 *****
0.60 *****
0.70 *****
0.80 *****
0.90 *****
1.00 *****
1.10 *****
1.20 *****
1.30 *****
1.40 *****

```