

```
stepanov@puma:~/teaching/084/robert/2$ cat test_associativity.c
#include <stdio.h>
```

```
int main(void)
{
    double x, y, z;

    x = 1.e20; y = -x; z = 1.;

    printf("%22.16e %22.16e\n", (x + y) + z, x + (y + z));

    return 0;
}
```

```
stepanov@puma:~/teaching/084/robert/2$ cc test_associativity.c
```

```
stepanov@puma:~/teaching/084/robert/2$ ./a.out
```

```
1.0000000000000000e+00 0.0000000000000000e+00
```

```
stepanov@puma:~/teaching/084/robert/2$
```

```
stepanov@puma:~/teaching/084/robert/2$ cat test_exp.c
#include <stdio.h>
```

```
int main(void)
{
    int n;
    double x, y, z, z_old;

    for (x = 0.; x >= -30.; x -= 1.)
    {
        for (z = 0., y = 1., n = 0; ; n++)
        {
            z_old = z; z += y;
            y *= x; y /= (((double)n) + 1.);
            if (z == z_old) break;
        }
        printf("%e %22.16e\n", x, z);
    }

    return 0;
}
```

```
stepanov@puma:~/teaching/084/robert/2$
```

