

Using math.h in a C Program

Although the basic mathematical operations are directly available in your programs, there will be many occasions when you will want to make use of more powerful, built-in functions. A number of different operations are available by using the command to `#include <math.h>`. Some of the more commonly used operations are listed below.

Function	Purpose
<code>pow(x,y)</code>	Returns a double which is the result of
<code>sqrt(x)</code>	Returns a double for the result of
<code>sin(x)</code>	Returns a double for the sine of x in radians .
<code>cos(x)</code>	Returns a double for the cosine of x in radians .
<code>tan(x)</code>	Returns a double for the tangent of x in radians .
<code>ceil(x)</code>	Returns an integer that is closest to, but greater than, x For example, <code>ceil(12.3) = 13</code>
<code>floor(x)</code>	Returns an integer that is closest to, but smaller than, x For example, <code>floor(12.8) = 12</code>
<code>fabs(x)</code>	Returns the absolute value of a double.

This is NOT the entire list of functions that are available in `math.h`. For those who are interested, you can examine this file to see what further features it has, and how it is structured.

Exercise:

Write a program called `moreMath.c` that uses all of the functions above, and displays the results in a console window.