- 1. With what value of x is Euler's identify derived from Euler's formula?

Euler's Formula Euler's formula, named after Leonhard Euler, is a mathematical formula in complex analysis that establishes the fundamental relationship between the trigonometric functions and the complex exponential function,

 $e^{ix} = \cos(x) + i\sin(x)$

Solution. When $x = \pi$, Euler's formula evaluates to,

$$e^{i\pi} + 1 = 0$$

Which is Euler's identify.