

BasicsReviewEuler\_Convolution

**Euler's formula is  $e^{ix} = \cos(x) + i \cdot \sin(x)$ , and Euler's Identity is  $e^{i\pi} + 1 = 0$ . See how these are obtained from the Maclaurin series of  $\cos(x)$ ,  $\sin(x)$ , and  $e^x$ . This is one of the most amazing things in all of mathematics! Created by Sal Khan. (i= j) 11:26**

<https://www.khanacademy.org/math/ap-calculus-bc/bc-series-new/bc-10-14/v/euler-s-formula-and-euler-s-identity>

**Digital Signal Processing (DSP) Tutorial: Euler's Formula and Fourier- Part 1 9:38**

[https://www.youtube.com/watch?v=He\\_Zokhmj8M](https://www.youtube.com/watch?v=He_Zokhmj8M)

**Discrete time convolution 17:08 (Basic Review)**

<https://www.youtube.com/watch?v=W56uw9GUvxU>

**Signal Processing Tutorial: Discrete-Time Convolution Examples (Part 1 - Intro) Covers LTI systems. 8:23**

<https://www.youtube.com/watch?v=iG-Lp7D5uhE>

**How does your mobile phone work? 9:03**

[https://www.youtube.com/watch?v=1JZG9x\\_VOwA](https://www.youtube.com/watch?v=1JZG9x_VOwA)