

Concept Question 3-3: Why do so many 1-D Fourier transform properties generalize directly to 2-D?

A 2-D Fourier transform is a 1-D Fourier transform in the horizontal direction, followed by a 1-D Fourier transform of the result in the vertical direction (or vice-versa). So a 2-D Fourier transform consists of two 1-D Fourier transform.