

## THEORY

When a system is subjected to a sinusoidal input, the output is also sinusoidal, but with a different amplitude and phase. The amplitude ratio is the magnitude of the system, and the phase shift is the phase of the system. The magnitude and phase of a system can be determined by the frequency response of the system. The frequency response of a system is the output of the system when the input is a sinusoid of a given frequency. The magnitude and phase of the output are the magnitude and phase of the system at that frequency.

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