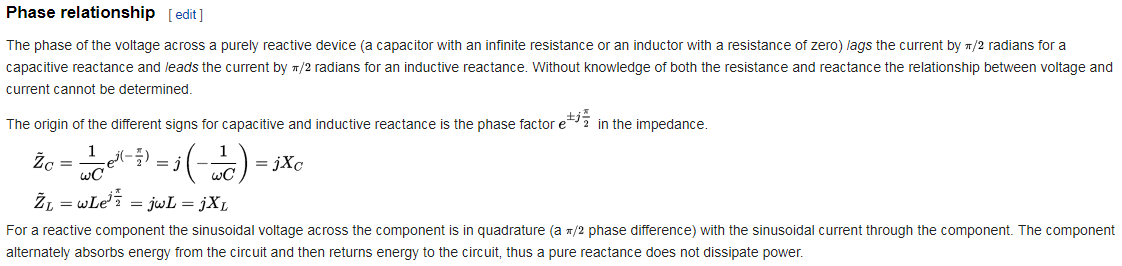
**reactance** is the opposition of a circuit element to a *change* in [current](https://en.wikipedia.org/wiki/Electric_current) or [voltage](https://en.wikipedia.org/wiki/Voltage), due to that element's [inductance](https://en.wikipedia.org/wiki/Inductance) or [capacitance](https://en.wikipedia.org/wiki/Capacitance).

In [phasor](https://en.wikipedia.org/wiki/Phasor) analysis, reactance is used to compute amplitude and phase changes of [sinusoidal](https://en.wikipedia.org/wiki/Sine_wave) [alternating current](https://en.wikipedia.org/wiki/Alternating_current) going through a circuit element. It is denoted by the symbol {\displaystyle \scriptstyle {X}}. An ideal [resistor](https://en.wikipedia.org/wiki/Resistor) has zero reactance, whereas ideal [inductors](https://en.wikipedia.org/wiki/Inductor) and [capacitors](https://en.wikipedia.org/wiki/Capacitor) have zero resistance – that is, respond to current only by reactance. The magnitude of the reactance of an inductor rises in proportion to a rise in frequency, while the magnitude of the reactance of a capacitor decreases in proportion to a rise in frequency. As frequency goes up, inductive reactance goes up and capacitive reactance goes down.

