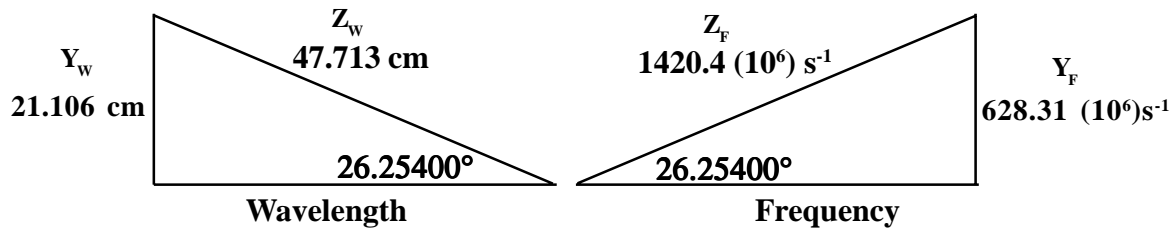


## Wavelength Frequency Triangle Pair SI Units



SI-Units

Constant of Proportionality:

For electromagnetic emissions, the proportionality constant between wavelength and frequency is the “speed of light”. For the triangle pair illustrated, the proportionality constant is the product of the vertical leg of one triangle times the hypotenuse of the second triangle. When the triangle pair is mutually related one is the inverse of the other and the product set will be equal.

$$\mathbf{c = Y_W * Z_F = Y_F * Z_W} \quad (1)$$

In conventional non-geometric form, the constant of proportionality is shown by the familiar three equation forms below, where **f** is frequency, **λ** is wavelength, and **c** is the speed of light.

$$\mathbf{f = c / \lambda \quad or \quad \lambda = c / f \quad or \quad c = f * \lambda} \quad (2)$$