

PHYS 1260 | Exam 3 Formulae

Speed of light in vacuum, $c = f\lambda = 3\text{E}8 \text{ m/s}$

Intensity, $I = \frac{P}{A}$

Average intensity, $\bar{I} = \frac{1}{2}\epsilon_0 c E_0^2$; $\epsilon_0 = 8.85\text{E-}12 \text{ F/m}$

Snell's law, $n_1 \sin \theta_1 = n_2 \sin \theta_2$; $n_{\text{air}} = 1.000293$

Index of refraction, $n = \frac{c}{v}$; $v = \frac{d}{t}$

Thin lens formula, $\frac{1}{s} + \frac{1}{s'} = \frac{1}{f}$

Linear magnification, $m = \frac{y'}{y} = -\frac{s'}{s}$

Angular magnification, $M = \frac{d}{f}$ (relaxed normal vision); $M = \frac{d}{f} + 1$ (image at near point)