Optics Class – Mid-Term Equation Sheet

Algebra and Trig.

y=mx+b *Sin θ = Op/Hyp, Cos θ = Adj/Hyp Tan θ=Op/Adj*

Snell's law

$n_i \sin\theta_i = n_t \sin\theta_t$

$n_i \sin\theta_c = n_t \sin 90°$

$$\lambda_{med} = \frac{v}{f} = \frac{c}{nf} = \frac{\lambda_{vac}}{n}$$

2π radians = 360°

Reflection + Absorption + Transmission = 100%

$$V_d = \frac{n_d - 1}{n_F - n_C}$$

$$\frac{n_2}{s_i} + \frac{n_1}{s_o} = \frac{n_2 - n_1}{R} = \mathcal{D}$$

$$\frac{1}{s_o} + \frac{1}{s_i} = (n-1)\left(\frac{1}{R_1} - \frac{1}{R_2}\right) = \frac{1}{f} = \mathcal{D}$$

$$\text{Magnification} = \frac{\text{Image height}}{\text{Object height}} = -\frac{s_i}{s_o}$$

DON'T FORGET ABOUT UNITS OF MEASURE!!

GOOD LUCK!!