$$B = \frac{L}{4\pi d^2}$$

1 parsec = 206265 AU = 3.26 light-years = 3.09×10^{16} m

1 AU = 1.5 x 10^{11} m

$$p\,[\text{arcsec}] = \frac{1}{d\,[\text{parsec}]}$$

1 kiloparsec = 1000 parsec

1 megaparsec = 10^6 parsec

$$\lambda_{peak}[\text{nm}] = \frac{2.898 \times 10^6}{T[\text{K}]}$$

1 light-year = 9.46×10^{15} m

1 year = 3.16×10^7 s

$$L_* = 4\pi R_*^2 \sigma \mathrm{T}_*^4 \qquad E = mc^2$$

$\sigma = 5.67 \times 10^{-8}$ W/m$^2K^4$

$c = 3 \times 10^8$ m/s

$$\frac{\Delta\lambda}{\lambda_{\text{emitted}}} = \frac{\lambda_{\text{observed}} - \lambda_{\text{emitted}}}{\lambda_{\text{emitted}}} = \frac{v_r}{c}$$

$\pi = 3.14159...$

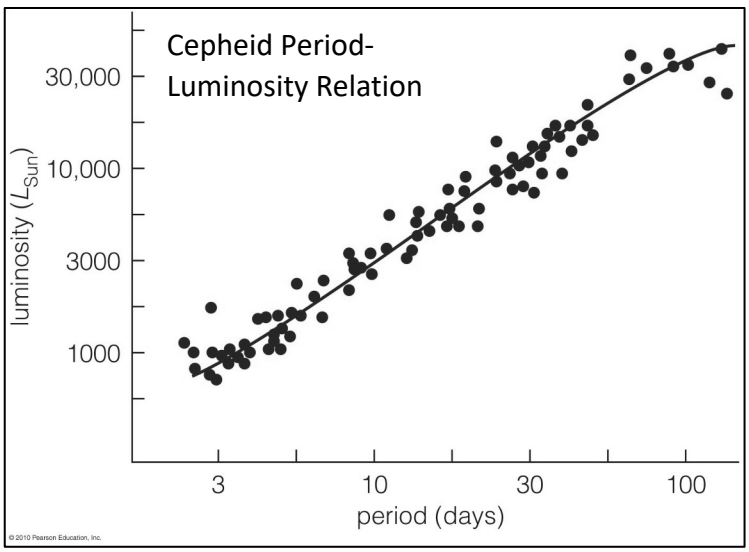
$G = 6.67 \times 10^{-11}$ m^3/kg$\times$s^2

$$R_{\text{Sch}} = \frac{2GM}{c^2}$$

$M_\odot$=2 x 10^{30} kg

$R_\odot$=6.96 x 10^8 m

$L_\odot$=3.8 x 10^{26} W



Sun's Main Sequence Lifetime = 10^{10} yr