A hodge-podge of equations:

$$\begin{split} P^2 &= \frac{4\pi^2}{GM} a^3 & dF = \frac{2GMm}{r^3} dr \\ v_{esc} &= \sqrt{\frac{2GM}{r}} & v_{circ} = \sqrt{\frac{GM}{r}} \\ r_{lim} < 2.5 (\frac{\bar{\rho}_p}{\bar{\rho}_m})^{1/3} R_p & v^2 = GM(\frac{2}{r} - \frac{1}{a}) \\ \lambda_{max}(cm) &= \frac{0.29}{T(K)} & L = 4\pi R^2 \sigma T^4 \\ r_{peri} &= a(1-e) & r_{apo} = a(1+e) \\ B_{\lambda}(T) &= \frac{2hc^2/\lambda^5}{e^{hc/\lambda kT} - 1} & A_V = 3.2 \times E(B-V) \\ E_n &= -\frac{13.6}{n^2} eV & T_{eq} = T_*(1-a)^{\frac{1}{4}} \sqrt{\frac{R_*}{2r}} \\ H &= \frac{kT}{mg} & P(z) = P_0 e^{-z/H} \\ V_t &= 4.74\mu(''/\text{yr})d(\text{pc}) & \langle M_V \rangle &= -2.43 \log P - 1.62 \\ [Fe/H] &= \log(Fe/H)_* - \log(Fe/H)_{\odot} & R_s &= \frac{2GM}{c^2} \\ M_I &= -8.7 \log(v_c/300) - 22.9 & r_e \sim \sigma^{1.24} \langle I \rangle^{-0.82} \\ M &= \frac{L}{4\pi} \frac{\sigma}{cGm} & \mu(r) = \mu_0 + 1.09(r/h) \\ v &= H_0 d & M &= \frac{5\langle R \rangle \sigma^2}{G} \\ 1 + z &= \frac{1}{R} & t_H = 1/H_0 \\ \left(\frac{\dot{R}}{R}\right)^2 - \frac{8}{3}\pi G\rho - \frac{1}{3}\Lambda c^2 &= -\frac{kc^2}{R^2} \\ 2T + U &= 0 \end{split}$$

Possibly Useful Constants and Conversions:

- Solar B-band Magnitudes: $m_B = -26.14, M_B = +5.42$
- Solar V-band Magnitudes: $m_V = -26.8, M_V = +4.76$
- Solar I-band Magnitudes: $m_I = -27.5, M_I = +4.08$
- Gravitational constant: if time is measured in years, distances in AU, and masses in solar masses, $G = 39.5 \text{ AU}^3 \text{ M}_{\odot}^{-1} \text{ yr}^{-2}$
- Gravitational constant: if time is measured in Myr, distances in pc, masses in solar masses, and velocities in km/s, $G = 4.3 \times 10^{-3} \text{ pc}^3 \text{ M}_{\odot}^{-1} \text{ Myr}^{-2}$. Or, equivalently, $G = 4.3 \times 10^{-3} \text{ pc} (\text{km/s})^2 \text{ M}_{\odot}^{-1}$
- Stefan-Boltzmann constant $\sigma = 7.18 \times 10^{-17}$ if luminosities are measured in solar luminosities, temperature is measured in Kelvin, and sizes are measured in solar radii.
- Hubble constant: $H_0 \approx 70 \text{ km/s/Mpc}$
- 1 parsec (pc) = 206,265 AU
- 1 arcsecond (") = 1/3600 degrees = 4.85×10^{-6} radians
- 1 Angstrom (Å) = 10^{-8} cm
- 1 year = 3.15×10^7 s
- $1 \text{ km/s} \approx 1 \text{ pc/Myr}$