Constants and astronomical quantities:

Speed of light	$c = 3 \times 10^8$ m s^{-1}
Gravitational constant	$G = 6.67 \times 10^{-11}$ Nm^{2}kg^{-2}
Planck's constant	$h = 6.626 \times 10^{-34}$ m^2 kg s^{-1} or $h = 4.136 \times 10^{-15}$ eV s
Stefan-Boltzmann	$\sigma = 5.67 \times 10^{-8}$ W m^{-2} K^{-4}
Mass of the Sun	1 $M_\odot = 1.99 \times 10^{30}$ kg
Luminosity of the Sun	1 $L_\odot = 3.85 \times 10^{26}$ W
Astronomical unit	1 AU $= 1.496 \times 10^{11}$ m
Parsec	1 pc = 3.26 ly $= 3.086 \times 10^{16}$ m = 206,265 AU
1 radian	206265 arcseconds = 57.29 degrees
Mass of the Earth	5.972 $\times 10^{24}$ kg
Radius of the Earth	6378 km

Useful equations:

$\alpha = \frac{D}{d}$ radians

K.E. $= 0.5mv^2$

P.E. $= \frac{-GMm}{r}$

$v_{esc} = \sqrt{\frac{2GM}{r}}$

$F = ma$

$a_c = v^2/r$

$F_g = \frac{GMm}{r^2}$

$P^2 = \frac{4\pi^2}{G(m_1+m_2)}a^3$

$\lambda\nu = c$

$E = h\nu$

$\lambda_{max} = \frac{0.29cmK}{T}$

$F = \sigma T^4$

$F = \frac{L}{4\pi R^2}$

$\theta = 1.22\lambda/D$ radians

$V = \frac{\lambda_{\rm obs}-\lambda_0}{\lambda_0}c$ Doppler velocity