Ray optics

1. **Speed of light in vacuum (c)**
   $c = 3 \times 10^8 \ \mathrm{m/s}$
2. **Refractive index of air**
   $n \approx 1.0003$ (often approximated to 1)
3. **Refractive index of water**
   $n \approx 1.33$
4. **Refractive index of glass**
   $n \approx 1.5$ (varies depending on type)
5. **Refractive index of diamond**
   $n \approx 2.42$
6. **Focal length of a lens (f)**
   Often appears in equations, though value depends on the lens.
7. **Gravitational constant (G)**
   Not directly relevant to ray optics, so **not included** here.
8. **Lens power unit**
   1 dioptre (D) = 1 m^{-1}
9. **Relationship between focal length and radius of curvature**
   $f = \frac{R}{2}$ (for spherical mirrors)
10. **Critical angle for water-air interface**
    $\theta_c \approx 48.6^\circ$
11. **Critical angle for glass-air interface**
    $\theta_c \approx 41.8^\circ$