Exemplo

$$0 = R\tan(\phi_0) - \frac{g}{2}\frac{R^2}{\left(v_o\cos(\phi_0)\right)^2}$$

$$\frac{g}{2}\frac{R^2}{\left(v_o\cos(\phi_0)\right)^2} = R\tan(\phi_0)$$

$$\frac{g}{2}\frac{R}{\left(v_o\cos(\phi_0)\right)^2} = \frac{\sin(\phi_0)}{\cos(\phi_0)}$$

$$R = \frac{2}{g}v_o^2\cos^2(\phi_0)\frac{\sin(\phi_0)}{\cos(\phi_0)}$$

$$\boxed{R = \frac{2v_o^2}{g}\cos(\phi_0)\sin(\phi_0)}$$