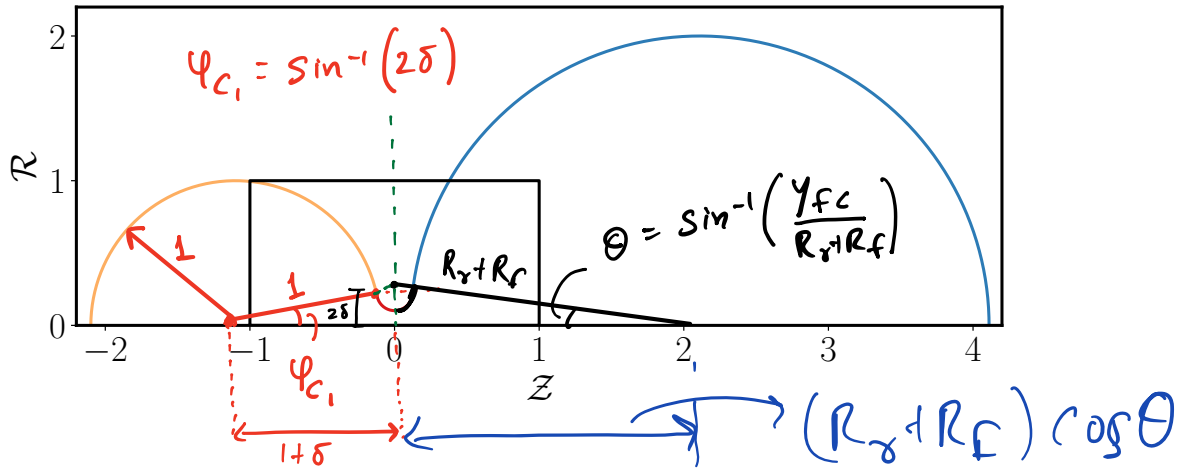
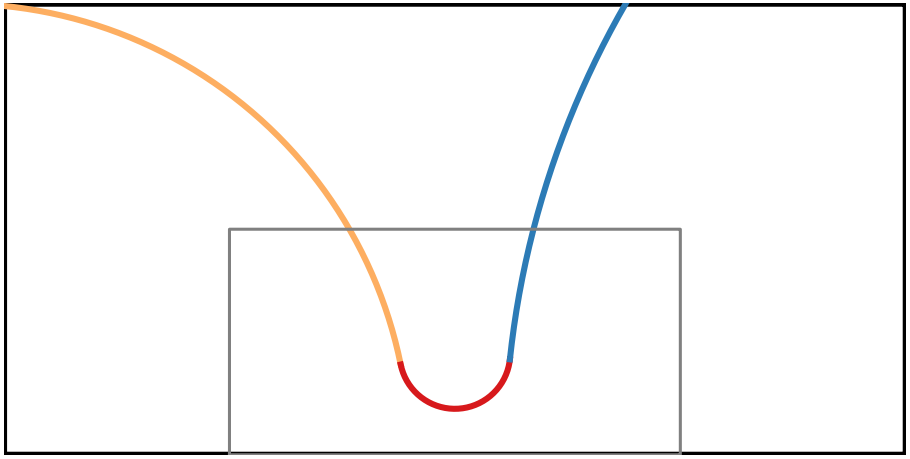
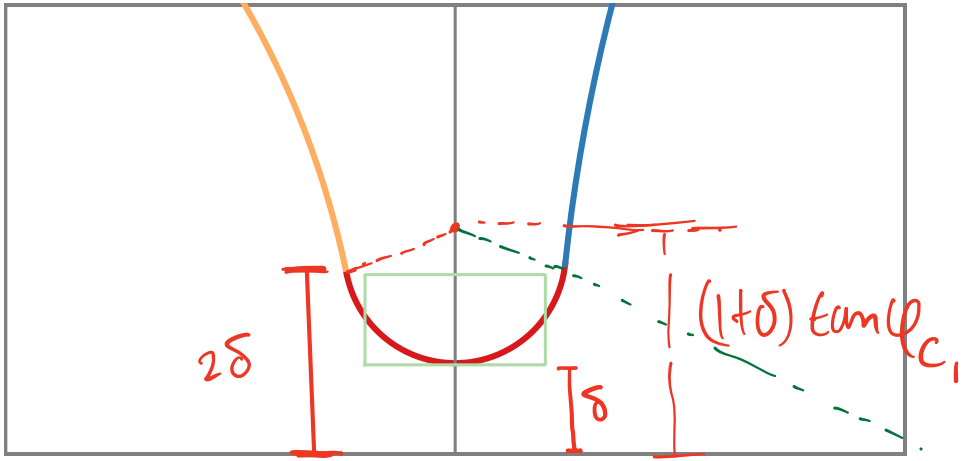
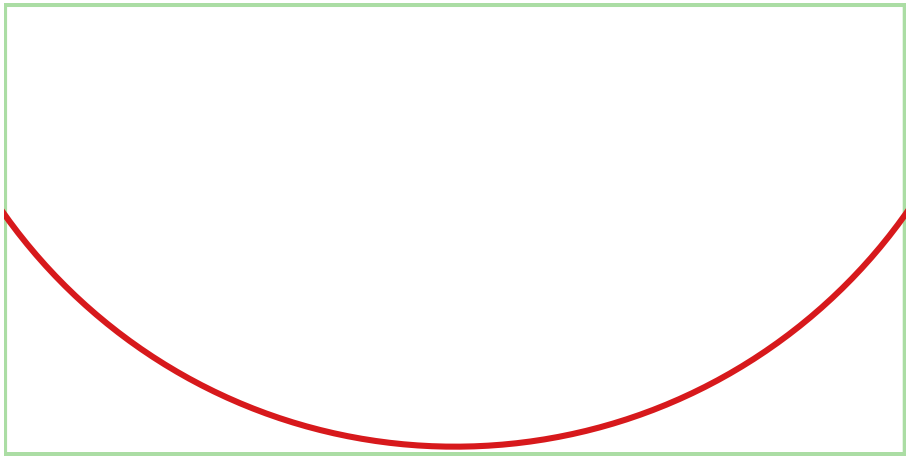

$\varphi_{c_1} = \sin^{-1}(2\delta)$
$\theta = \sin^{-1}\left(\frac{y_{fc}}{R_\gamma + R_f}\right)$
$R_\gamma + R_f$
1
1
2δ
φ_{c_1}
$1+\delta$
$(R_\gamma + R_f)\cos\theta$
$\mathcal{R}$
$\mathcal{Z}$




2δ
δ
$(1+\delta)\tan\varphi_{c_1}$



First circle

Center : $(1+\delta, 0) \leftarrow (x_{1c}, 0)$

φ : π, φ_{c_1} # $\varphi_{c_1} = \sin^{-1}(2\delta)$

$x_1 = x_{1c} + \cos\varphi$

$y_1 = \sin\varphi$

Fillet circle

center $(0, y_{fc}) \longrightarrow (0, (1+\delta)\tan\varphi_{c_1})$

Radius : $\frac{(1+\delta)}{\cos\varphi_{c_1}} - 1$

$\Rightarrow$ Need to join this to second circle

$\theta = \sin^{-1}\left(\frac{y_{fc}}{R_g + R_f}\right)$

fillet $\varphi_{start} = \pi/2 - \varphi_{c_1}$

fillet $\varphi_{end} = \left(\pi/2 - \theta\right) \times -1$

$x_f = -R_F \sin\varphi_{fillet}$

$y_f = y_{fc} - R_f \cos(\varphi_{fillet})$

second circle

center: $((R_f + R_\gamma)\cos\theta, 0) \longleftarrow (x_{c_2}, 0)$

φ: $(\pi - \theta, 0)$

$x_2 = x_{c_2} + R_\gamma \cos\varphi$

$y_2 = R_\gamma \sin\varphi$