

$$\text{In}[^*]:= \int_{-0.5}^{0.5} \int_{-0.5}^{0.5} \sqrt{x^2 + y^2} \, dx \, dy$$

$$\text{Out}[^*]= 0.382598$$

$$\text{In}[^*]:= \int_{y0-0.5}^{y0+0.5} \int_{x0-0.5}^{x0+0.5} \sqrt{x^2 + y^2} \, dx \, dy$$

$$\begin{aligned} \text{Out}[^*]= & \text{ConditionalExpression} \left[ -0.166667 \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} (-0.5 + y0) + \right. \\ & 0.333333 x0 \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} (-0.5 + y0) - \\ & 0.166667 \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} (-0.5 + y0) - \\ & 0.333333 x0 \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} (-0.5 + y0) + \\ & 0.166667 (0.5 + y0) \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} - \\ & 0.333333 x0 (0.5 + y0) \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} + \\ & 0.166667 (0.5 + y0) \sqrt{0.25 + x0 (1. + x0) + (0.5 + y0)^2} + \\ & 0.333333 x0 (0.5 + y0) \sqrt{0.25 + x0 (1. + x0) + (0.5 + y0)^2} + \\ & 0.166667 (-0.5 + y0)^3 \text{Log} \left[ -0.5 + x0 + \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} \right] - \\ & 0.166667 (-0.5 + y0)^3 \text{Log} \left[ 0.5 + x0 + \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} \right] - \\ & 0.0208333 \text{Log} \left[ -0.5 + \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} + y0 \right] + \\ & 0.125 x0 \text{Log} \left[ -0.5 + \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} + y0 \right] - \\ & 0.25 x0^2 \text{Log} \left[ -0.5 + \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} + y0 \right] + \\ & 0.166667 x0^3 \text{Log} \left[ -0.5 + \sqrt{0.25 + (-1. + x0) x0 + (-0.5 + y0)^2} + y0 \right] - \\ & 0.0208333 \text{Log} \left[ -0.5 + \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} + y0 \right] - \\ & 0.125 x0 \text{Log} \left[ -0.5 + \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} + y0 \right] - \\ & 0.25 x0^2 \text{Log} \left[ -0.5 + \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} + y0 \right] - \\ & 0.166667 x0^3 \text{Log} \left[ -0.5 + \sqrt{0.25 + x0 (1. + x0) + (-0.5 + y0)^2} + y0 \right] - \\ & 0.166667 (0.5 + y0)^3 \text{Log} \left[ -0.5 + x0 + \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} \right] + \\ & 0.0208333 \text{Log} \left[ 0.5 + y0 + \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} \right] - \\ & 0.125 x0 \text{Log} \left[ 0.5 + y0 + \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} \right] + \\ & 0.25 x0^2 \text{Log} \left[ 0.5 + y0 + \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} \right] - \\ & \left. 0.166667 x0^3 \text{Log} \left[ 0.5 + y0 + \sqrt{0.25 + (-1. + x0) x0 + (0.5 + y0)^2} \right] + \right] \end{aligned}$$

$$\begin{aligned}
& 0.166667 (0.5 + y_0)^3 \operatorname{Log}\left[0.5 + x_0 + \sqrt{0.25 + x_0 (1. + x_0) + (0.5 + y_0)^2}\right] + \\
& 0.0208333 \operatorname{Log}\left[0.5 + y_0 + \sqrt{0.25 + x_0 (1. + x_0) + (0.5 + y_0)^2}\right] + \\
& 0.125 x_0 \operatorname{Log}\left[0.5 + y_0 + \sqrt{0.25 + x_0 (1. + x_0) + (0.5 + y_0)^2}\right] + \\
& 0.25 x_0^2 \operatorname{Log}\left[0.5 + y_0 + \sqrt{0.25 + x_0 (1. + x_0) + (0.5 + y_0)^2}\right] + \\
& 0.166667 x_0^3 \operatorname{Log}\left[0.5 + y_0 + \sqrt{0.25 + x_0 (1. + x_0) + (0.5 + y_0)^2}\right], \\
& \left(x_0 \in \mathbb{R} \ \&\& \operatorname{Re}[y_0] > 0.5 \ \&\& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \ \&\& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] \neq 0 \left. \right) \mid \mid \\
& \left(x_0 \in \mathbb{R} \ \&\& \operatorname{Re}[y_0] < -0.5 \ \&\& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \ \&\& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] \neq 0 \left. \right) \mid \mid \left(\operatorname{Re}[y_0] > 0.5 \ \&\& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \ \&\& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] > 0 \ \&\& -1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \geq 0.5 \left. \right) \mid \mid \\
& \left(\operatorname{Re}[y_0] > 0.5 \ \&\& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \ \&\& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] > 0 \ \&\& 1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \leq 0.5 \left. \right) \mid \mid \\
& \left(\operatorname{Re}[y_0] > 0.5 \ \&\& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \ \&\& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq
\end{aligned}$$

$$\begin{aligned}
& 0.5 \& \\
& \left( \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \right. \\
& \quad \left. -0.5 \& \operatorname{Im}[y_0] < 0 \& 1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \geq 0.5 \right) \mid \mid \\
& \left( \operatorname{Re}[y_0] > 0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right. \\
& \quad \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \& \\
& \quad \left. \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \right. \\
& \quad \left. -0.5 \& \operatorname{Im}[y_0] < 0 \& -1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \leq 0.5 \right) \mid \mid \\
& \left( x_0 \in \mathbb{R} \& \operatorname{Re}[y_0] > 0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \quad \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \& \operatorname{Re}[y_0] + \\
& \quad \quad \left. \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq -0.5 \& \\
& \quad \operatorname{Im}[y_0] \neq 0 \& \frac{0.500000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& \quad \left. 1.000000000000000000 \operatorname{Re}[y_0] \geq 0.500000000000000000 \right) \mid \mid \\
& \left( \operatorname{Re}[y_0] < -0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right. \\
& \quad \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \& \\
& \quad \left. \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \right. \\
& \quad \left. -0.5 \& \operatorname{Im}[y_0] > 0 \& -1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \geq 0.5 \right) \mid \mid \\
& \left( \operatorname{Re}[y_0] < -0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right. \\
& \quad \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \& \\
& \quad \left. \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \right. \\
& \quad \left. -0.5 \& \operatorname{Im}[y_0] > 0 \& 1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \leq 0.5 \right) \mid \mid \\
& \left( \operatorname{Re}[y_0] < -0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right.
\end{aligned}$$

$$\begin{aligned}
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] < 0 \&\& 1. \operatorname{Im}[y0] + \operatorname{Re}[x0] \geq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] < -0.5 \&\& -\frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \geq 0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] < 0 \&\& -1. \operatorname{Im}[y0] + \operatorname{Re}[x0] \leq 0.5 \Big) \mid \mid \\
& \left( x0 \in \mathbb{R} \&\& \operatorname{Re}[y0] < -0.5 \&\& -\frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \operatorname{Re}[y0] + \\
& \quad \left. \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq -0.5 \&\& \\
& \operatorname{Im}[y0] \neq 0 \&\& \frac{0.500000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.000000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& \quad 1.000000000000000000 \operatorname{Re}[y0] \geq 0.500000000000000000 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] > 0.5 \&\& -\frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \geq 0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] > 0 \&\& \operatorname{Im}[x0] > 0 \&\& -\frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \geq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] > 0.5 \&\& -\frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \geq 0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] > 0 \&\& \operatorname{Im}[x0] > 0 \&\& \frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \leq 0.5 \Big) \mid \mid
\end{aligned}$$

$$\left( \begin{aligned} & \text{Re}[y0] > 0.5 \ \& \ - \frac{0.5 \text{Im}[x0]}{\text{Im}[y0]} + \frac{1. \text{Im}[x0] \text{Re}[x0]}{\text{Im}[y0]} + 1. \text{Re}[y0] \geq 0.5 \ \& \ \\ & \text{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\ & 0.5 \ \& \ \\ & \text{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\ & -0.5 \ \& \ \text{Im}[y0] > 0 \ \& \ \text{Im}[x0] < 0 \ \& \ - \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \geq 0.5 \end{aligned} \right) \ ||$$

$$\left( \begin{aligned} & \text{Re}[y0] > 0.5 \ \& \ - \frac{0.5 \text{Im}[x0]}{\text{Im}[y0]} + \frac{1. \text{Im}[x0] \text{Re}[x0]}{\text{Im}[y0]} + 1. \text{Re}[y0] \geq 0.5 \ \& \ \\ & \text{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\ & 0.5 \ \& \ \\ & \text{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\ & -0.5 \ \& \ \text{Im}[y0] > 0 \ \& \ \text{Im}[x0] < 0 \ \& \ - \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \leq 0.5 \end{aligned} \right) \ ||$$

$$\left( \begin{aligned} & \text{Re}[y0] > 0.5 \ \& \ - \frac{0.5 \text{Im}[x0]}{\text{Im}[y0]} + \frac{1. \text{Im}[x0] \text{Re}[x0]}{\text{Im}[y0]} + 1. \text{Re}[y0] \geq 0.5 \ \& \ \\ & \text{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\ & 0.5 \ \& \ \\ & \text{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\ & -0.5 \ \& \ \text{Im}[y0] < 0 \ \& \ \text{Im}[x0] > 0 \ \& \ - \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \geq 0.5 \end{aligned} \right) \ ||$$

$$\left( \begin{aligned} & \text{Re}[y0] > 0.5 \ \& \ - \frac{0.5 \text{Im}[x0]}{\text{Im}[y0]} + \frac{1. \text{Im}[x0] \text{Re}[x0]}{\text{Im}[y0]} + 1. \text{Re}[y0] \geq 0.5 \ \& \ \\ & \text{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\ & 0.5 \ \& \ \\ & \text{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\ & -0.5 \ \& \ \text{Im}[y0] < 0 \ \& \ \text{Im}[x0] > 0 \ \& \ - \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \leq 0.5 \end{aligned} \right) \ ||$$



[illegible]





[illegible]

$$\begin{aligned}
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \operatorname{Im}[x_0] > 0 \& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \& \Big) \Big| \Big| \\
& \left( \operatorname{Re}[y_0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \operatorname{Im}[x_0] > 0 \& - \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + 1. \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \leq 0.5 \& \Big) \Big| \Big| \\
& \left( \operatorname{Re}[y_0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \operatorname{Im}[x_0] < 0 \& - \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + 1. \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \& \Big) \Big| \Big| \\
& \left( \operatorname{Re}[y_0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \geq 0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \operatorname{Im}[x_0] < 0 \& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \leq 0.5 \& \Big) \Big| \Big| \\
& \left( \operatorname{Re}[y_0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] > 0 \& -1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \geq 0.5 \& \\
& \frac{0.500000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.0000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& \left. 1.0000000000000000 \operatorname{Re}[y_0] \geq 0.5000000000000000 \right) \Big| \Big| \\
& \left( \operatorname{Re}[y_0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right.
\end{aligned}$$

$$\begin{aligned}
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] > 0 \&\& 1. \operatorname{Im}[y0] + \operatorname{Re}[x0] \leq 0.5 \&\& \\
& \quad \frac{0.50000000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.000000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& \quad \left( 1.000000000000000000 \operatorname{Re}[y0] \geq 0.500000000000000000 \right) || \\
& \left( \operatorname{Re}[y0] < -0.5 \&\& - \frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] < 0 \&\& 1. \operatorname{Im}[y0] + \operatorname{Re}[x0] \geq 0.5 \&\& \\
& \quad \frac{0.50000000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.000000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& \quad \left( 1.000000000000000000 \operatorname{Re}[y0] \geq 0.500000000000000000 \right) || \\
& \left( \operatorname{Re}[y0] < -0.5 \&\& - \frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] < 0 \&\& -1. \operatorname{Im}[y0] + \operatorname{Re}[x0] \leq 0.5 \&\& \\
& \quad \frac{0.50000000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.000000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& \quad \left( 1.000000000000000000 \operatorname{Re}[y0] \geq 0.500000000000000000 \right) || \left( \operatorname{Re}[y0] < -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y0] > 0 \&\& -1. \operatorname{Im}[y0] + \operatorname{Re}[x0] \geq 0.5 \&\& \operatorname{Re}[x0] > 0.5 \&\& \\
& \quad 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + \\
& \quad \left. 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \&\& \operatorname{Im}[y0] - 1. \operatorname{Re}[x0] \leq -0.5 \right) || \left( \operatorname{Re}[y0] < -0.5 \&\& \right.
\end{aligned}$$



$$\begin{aligned}
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] < 0 \ \&\& 1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \geq 0.5 \ \&\& \operatorname{Re}[x_0] < 0.5 \ \&\& \\
& 0.25 - 1. \operatorname{Im}[x_0]^2 + \frac{0.25 \operatorname{Im}[x_0]^2}{\operatorname{Im}[y_0]^2} - 1. \operatorname{Im}[y_0]^2 - 1. \operatorname{Re}[x_0] - \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]^2} + \\
& 1. \operatorname{Re}[x_0]^2 + \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]^2}{\operatorname{Im}[y_0]^2} \geq 0 \ \&\& -\operatorname{Im}[y_0] + 1. \operatorname{Re}[x_0] \leq 0.5 \Big) \mid \mid \Big( \operatorname{Re}[y_0] < -0.5 \ \&\& \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] < 0 \ \&\& -1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \leq 0.5 \ \&\& \operatorname{Re}[x_0] > 0.5 \ \&\& \\
& 0.25 - 1. \operatorname{Im}[x_0]^2 + \frac{0.25 \operatorname{Im}[x_0]^2}{\operatorname{Im}[y_0]^2} - 1. \operatorname{Im}[y_0]^2 - 1. \operatorname{Re}[x_0] - \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]^2} + \\
& 1. \operatorname{Re}[x_0]^2 + \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]^2}{\operatorname{Im}[y_0]^2} \geq 0 \ \&\& \operatorname{Im}[y_0] + 1. \operatorname{Re}[x_0] \geq 0.5 \Big) \mid \mid \Big( \operatorname{Re}[y_0] < -0.5 \ \&\& \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] < 0 \ \&\& -1. \operatorname{Im}[y_0] + \operatorname{Re}[x_0] \leq 0.5 \ \&\& \operatorname{Re}[x_0] < 0.5 \ \&\& \\
& 0.25 - 1. \operatorname{Im}[x_0]^2 + \frac{0.25 \operatorname{Im}[x_0]^2}{\operatorname{Im}[y_0]^2} - 1. \operatorname{Im}[y_0]^2 - 1. \operatorname{Re}[x_0] - \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]^2} + 1. \operatorname{Re}[x_0]^2 + \\
& \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]^2}{\operatorname{Im}[y_0]^2} \geq 0 \ \&\& -\operatorname{Im}[y_0] + 1. \operatorname{Re}[x_0] \leq 0.5 \Big) \mid \mid \Big( x_0 \in \mathbb{R} \ \&\& \operatorname{Re}[y_0] > 0.5 \ \&\& \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \ \&\& \operatorname{Im}[y_0] > 0 \ \&\& \operatorname{Re}[x_0] > 0.5 \ \&\& 0.25 - 1. \operatorname{Im}[x_0]^2 + \frac{0.25 \operatorname{Im}[x_0]^2}{\operatorname{Im}[y_0]^2} - 1. \operatorname{Im}[y_0]^2 - \\
& 1. \operatorname{Re}[x_0] - \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]^2} + 1. \operatorname{Re}[x_0]^2 + \frac{1. \operatorname{Im}[x_0]^2 \operatorname{Re}[x_0]^2}{\operatorname{Im}[y_0]^2} \geq 0 \ \&\& \\
& \operatorname{Im}[y_0] - 1. \operatorname{Re}[x_0] \leq -0.5 \Big) \mid \mid \Big( x_0 \in \mathbb{R} \ \&\& \operatorname{Re}[y_0] > 0.5 \ \&\& \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \ \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq
\end{aligned}$$

$$\begin{aligned}
& -0.5 \& \operatorname{Im}[y0] > 0 \& \operatorname{Re}[x0] < 0.5 \& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - \\
& 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& \\
& \operatorname{Im}[y0] + 1. \operatorname{Re}[x0] \leq 0.5 \Big) \mid \mid \Big( x0 \in \mathbb{R} \& \operatorname{Re}[y0] > 0.5 \& \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \operatorname{Re}[x0] > 0.5 \& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - \\
& 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& \\
& \operatorname{Im}[y0] + 1. \operatorname{Re}[x0] \geq 0.5 \Big) \mid \mid \Big( x0 \in \mathbb{R} \& \operatorname{Re}[y0] > 0.5 \& \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \operatorname{Re}[x0] < 0.5 \& \\
& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + \\
& 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& -\operatorname{Im}[y0] + 1. \operatorname{Re}[x0] \leq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] > 0.5 \& -\frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y0] > 0 \& \\
& \frac{0.500000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.000000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& 1.000000000000000000 \operatorname{Re}[y0] \geq 0.500000000000000000 \& \\
& \operatorname{Im}[x0] > 0 \& -\frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \geq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] > 0.5 \& -\frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \& \right.
\end{aligned}$$

$$\begin{aligned}
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y_0] > 0 \&\& \frac{0.500000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \\
& \quad \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - 1.000000000000000000 \operatorname{Re}[y_0] \geq \\
& \quad 0.500000000000000000 \&\& \operatorname{Im}[x_0] > 0 \&\& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \leq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y_0] > 0.5 \&\& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y_0] > 0 \&\& \frac{0.500000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \\
& \quad \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - 1.000000000000000000 \operatorname{Re}[y_0] \geq \\
& \quad 0.500000000000000000 \&\& \operatorname{Im}[x_0] < 0 \&\& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y_0] > 0.5 \&\& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& \quad -0.5 \&\& \operatorname{Im}[y_0] > 0 \&\& \\
& \quad \frac{0.500000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& \quad \frac{1.000000000000000000 \operatorname{Re}[y_0]}{\operatorname{Im}[y_0]} \geq 0.500000000000000000 \&\& \\
& \quad \operatorname{Im}[x_0] < 0 \&\& - \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + 1. \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \leq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y_0] > 0.5 \&\& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \&\& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& \quad 0.5 \&\& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq
\end{aligned}$$

$$\begin{aligned}
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \frac{0.5000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \\
& \frac{1.0000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - 1.0000000000000000 \operatorname{Re}[y_0] \geq \\
& 0.5000000000000000 \& \operatorname{Im}[x_0] > 0 \& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \& \& \\
& \left( \operatorname{Re}[y_0] > 0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \\
& \frac{0.5000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.0000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& 1.0000000000000000 \operatorname{Re}[y_0] \geq 0.5000000000000000 \& \& \\
& \operatorname{Im}[x_0] > 0 \& - \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + 1. \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \leq 0.5 \& \& \left. \right) \& \& \\
& \left( \operatorname{Re}[y_0] > 0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \\
& \frac{0.5000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.0000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& 1.0000000000000000 \operatorname{Re}[y_0] \geq 0.5000000000000000 \& \& \\
& \operatorname{Im}[x_0] < 0 \& - \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + 1. \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \& \& \left. \right) \& \& \\
& \left( \operatorname{Re}[y_0] > 0.5 \& - \frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y_0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \\
& \frac{0.5000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.0000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& 1.0000000000000000 \operatorname{Re}[y_0] \geq 0.5000000000000000 \& \& \operatorname{Im}[x_0] < 0 \& \&
\end{aligned}$$



[illegible]



$$\begin{aligned}
& -0.5 \& \text{Im}[y0] > 0 \& \text{Im}[x0] < 0 \& -\frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + 1. \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \leq 0.5 \& \\
& \text{Re}[x0] < 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] + 1. \text{Re}[x0] \leq 0.5 \Big) \mid \mid \Big( \text{Re}[y0] > 0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \text{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \text{Im}[y0] < 0 \& \text{Im}[x0] > 0 \& \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \geq 0.5 \& \\
& \text{Re}[x0] > 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] + 1. \text{Re}[x0] \geq 0.5 \Big) \mid \mid \Big( \text{Re}[y0] > 0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \text{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \text{Im}[y0] < 0 \& \text{Im}[x0] > 0 \& \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \geq 0.5 \& \\
& \text{Re}[x0] < 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& -\text{Im}[y0] + 1. \text{Re}[x0] \leq 0.5 \Big) \mid \mid \Big( \text{Re}[y0] > 0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \text{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \text{Im}[y0] < 0 \& \text{Im}[x0] > 0 \& -\frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + 1. \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \leq 0.5 \& \\
& \text{Re}[x0] > 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] + 1. \text{Re}[x0] \geq 0.5 \Big) \mid \mid \Big( \text{Re}[y0] > 0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \&
\end{aligned}$$



$$\text{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq 0.5 \ \&\&$$

$$\begin{aligned} & \text{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\ & -0.5 \ \& \ \text{Im}[y_0] < 0 \ \& \ \text{Im}[x_0] < 0 \ \& \ \frac{0.5 \text{Im}[y_0]}{\text{Im}[x_0]} + \text{Re}[x_0] + \frac{1. \text{Im}[y_0] \text{Re}[y_0]}{\text{Im}[x_0]} \leq 0.5 \ \& \end{aligned}$$

$$\operatorname{Re}[x0] < 0.5 \& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] -$$

$$\frac{1 \cdot \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + 1 \cdot \text{Re}[x0]^2 + \frac{1 \cdot \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \&\&$$

$$-\text{Im}[y_0] + 1. \text{Re}[x_0] \leq 0.5 \Big) \mid \mid \Big( x_0 \in \mathbb{R} \ \&\& \ \text{Re}[y_0] < -0.5 \ \&\&$$

$$\operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq 0.5 \ \&\&$$

$$\begin{aligned} & \text{Re} \left[ y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2} \right] \geq \\ & -0.5 \ \& \ \text{Im}[y_0] > 0 \ \& \ \text{Re}[x_0] > 0.5 \ \& \ 0.25 - 1. \text{Im}[x_0]^2 + \frac{0.25 \text{Im}[x_0]^2}{\text{Im}[y_0]^2} - 1. \text{Im}[y_0]^2 - \end{aligned}$$

$$1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \&$$

$$\left. \text{Im}[y_0] - 1. \text{Re}[x_0] \leq -0.5 \right) \mid \mid \left( x_0 \in \mathbb{R} \ \&\& \ \text{Re}[y_0] < -0.5 \ \&\& \right.$$

$$\operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq 0.5 \ \&\&$$

$$\begin{aligned} & \operatorname{Re}\left[y_0 + \sqrt{0.2500000000000000000000 - (-1.00000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\ & -0.5 \&\& \operatorname{Im}[y_0] > 0 \&\& \operatorname{Re}[x_0] < 0.5 \&\& 0.25 - 1. \operatorname{Im}[x_0]^2 + \frac{0.25 \operatorname{Im}[x_0]^2}{\operatorname{Im}[y_0]^2} - 1. \operatorname{Im}[y_0]^2 - \end{aligned}$$

$$1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \&$$

$$\left. \text{Im}[y_0] + 1. \text{Re}[x_0] \leq 0.5 \right) \mid \mid \left( x_0 \in \mathbb{R} \ \&\& \ \text{Re}[y_0] < -0.5 \ \&\& \right.$$

$$\operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq 0.5 \&\&$$

[illegible]



$$\begin{aligned}
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] > 0 \& \\
& \frac{0.50000000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& 1.000000000000000000 \operatorname{Re}[y_0] \geq 0.500000000000000000 \& \\
& \left( \operatorname{Im}[x_0] < 0 \& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \right) || \\
& \left( \operatorname{Re}[y_0] < -0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] > 0 \& \\
& \frac{0.50000000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& 1.000000000000000000 \operatorname{Re}[y_0] \geq 0.500000000000000000 \& \\
& \left( \operatorname{Im}[x_0] < 0 \& -\frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + 1. \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \leq 0.5 \right) || \\
& \left( \operatorname{Re}[y_0] < -0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \\
& \frac{0.50000000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} - \\
& 1.000000000000000000 \operatorname{Re}[y_0] \geq 0.500000000000000000 \& \\
& \left( \operatorname{Im}[x_0] > 0 \& \frac{0.5 \operatorname{Im}[y_0]}{\operatorname{Im}[x_0]} + \operatorname{Re}[x_0] + \frac{1. \operatorname{Im}[y_0] \operatorname{Re}[y_0]}{\operatorname{Im}[x_0]} \geq 0.5 \right) || \\
& \left( \operatorname{Re}[y_0] < -0.5 \& -\frac{0.5 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} + \frac{1. \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} + 1. \operatorname{Re}[y_0] \leq -0.5 \& \right. \\
& \operatorname{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (-0.5 + y_0)^2} + y_0\right] \geq \\
& 0.5 \& \\
& \operatorname{Re}\left[y_0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x_0) x_0 + (0.5 + y_0)^2}\right] \geq \\
& -0.5 \& \operatorname{Im}[y_0] < 0 \& \\
& \frac{0.50000000000000000000 \operatorname{Im}[x_0]}{\operatorname{Im}[y_0]} - \frac{1.000000000000000000 \operatorname{Im}[x_0] \operatorname{Re}[x_0]}{\operatorname{Im}[y_0]} -
\end{aligned}$$

$$\begin{aligned}
& 1.0000000000000000 \operatorname{Re}[y0] \geq 0.5000000000000000 \& \\
& \operatorname{Im}[x0] > 0 \& - \frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \leq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (-0.5 + y0)^2 + y0} \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \\
& \frac{0.5000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.0000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& 1.0000000000000000 \operatorname{Re}[y0] \geq 0.5000000000000000 \& \\
& \operatorname{Im}[x0] < 0 \& - \frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \geq 0.5 \Big) \mid \mid \\
& \left( \operatorname{Re}[y0] < -0.5 \& - \frac{0.5 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} + \frac{1. \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} + 1. \operatorname{Re}[y0] \leq -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (-0.5 + y0)^2 + y0} \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \\
& \frac{0.5000000000000000 \operatorname{Im}[x0]}{\operatorname{Im}[y0]} - \frac{1.0000000000000000 \operatorname{Im}[x0] \operatorname{Re}[x0]}{\operatorname{Im}[y0]} - \\
& 1.0000000000000000 \operatorname{Re}[y0] \geq 0.5000000000000000 \& \operatorname{Im}[x0] < 0 \& \\
& \frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \leq 0.5 \Big) \mid \mid \left( \operatorname{Re}[y0] < -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (-0.5 + y0)^2 + y0} \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] > 0 \& \operatorname{Im}[x0] > 0 \& - \frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \geq 0.5 \& \\
& \operatorname{Re}[x0] > 0.5 \& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + \\
& 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& \operatorname{Im}[y0] - 1. \operatorname{Re}[x0] \leq -0.5 \Big) \mid \mid \left( \operatorname{Re}[y0] < -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (-0.5 + y0)^2 + y0} \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.2500000000000000 + (-1.0000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq
\end{aligned}$$



$$\begin{aligned}
& -0.5 \& \text{Im}[y0] > 0 \& \text{Im}[x0] > 0 \& -\frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + 1. \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \geq 0.5 \& \\
& \text{Re}[x0] < 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] + 1. \text{Re}[x0] \leq 0.5 \Big) \mid \mid \Big( \text{Re}[y0] < -0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \text{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \text{Im}[y0] > 0 \& \text{Im}[x0] > 0 \& \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \leq 0.5 \& \\
& \text{Re}[x0] > 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] - 1. \text{Re}[x0] \leq -0.5 \Big) \mid \mid \Big( \text{Re}[y0] < -0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \text{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \text{Im}[y0] > 0 \& \text{Im}[x0] > 0 \& \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \leq 0.5 \& \\
& \text{Re}[x0] < 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] + 1. \text{Re}[x0] \leq 0.5 \Big) \mid \mid \Big( \text{Re}[y0] < -0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \& \\
& \text{Re}\left[y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2}\right] \geq \\
& -0.5 \& \text{Im}[y0] > 0 \& \text{Im}[x0] < 0 \& \frac{0.5 \text{Im}[y0]}{\text{Im}[x0]} + \text{Re}[x0] + \frac{1. \text{Im}[y0] \text{Re}[y0]}{\text{Im}[x0]} \geq 0.5 \& \\
& \text{Re}[x0] > 0.5 \& 0.25 - 1. \text{Im}[x0]^2 + \frac{0.25 \text{Im}[x0]^2}{\text{Im}[y0]^2} - 1. \text{Im}[y0]^2 - 1. \text{Re}[x0] - \frac{1. \text{Im}[x0]^2 \text{Re}[x0]}{\text{Im}[y0]^2} + \\
& 1. \text{Re}[x0]^2 + \frac{1. \text{Im}[x0]^2 \text{Re}[x0]^2}{\text{Im}[y0]^2} \geq 0 \& \text{Im}[y0] - 1. \text{Re}[x0] \leq -0.5 \Big) \mid \mid \Big( \text{Re}[y0] < -0.5 \& \\
& \text{Re}\left[\sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0\right] \geq \\
& 0.5 \&
\end{aligned}$$



$$\begin{aligned}
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \operatorname{Im}[x0] > 0 \& \frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \geq 0.5 \& \\
& \operatorname{Re}[x0] < 0.5 \& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + \\
& 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& -\operatorname{Im}[y0] + 1. \operatorname{Re}[x0] \leq 0.5 \Big) \mid \mid \left( \operatorname{Re}[y0] < -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \operatorname{Im}[x0] > 0 \& \\
& -\frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \leq 0.5 \& \operatorname{Re}[x0] > 0.5 \& \\
& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + \\
& 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& \operatorname{Im}[y0] + 1. \operatorname{Re}[x0] \geq 0.5 \Big) \mid \mid \left( \operatorname{Re}[y0] < -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \operatorname{Im}[x0] > 0 \& \\
& -\frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \leq 0.5 \& \operatorname{Re}[x0] < 0.5 \& \\
& 0.25 - 1. \operatorname{Im}[x0]^2 + \frac{0.25 \operatorname{Im}[x0]^2}{\operatorname{Im}[y0]^2} - 1. \operatorname{Im}[y0]^2 - 1. \operatorname{Re}[x0] - \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]}{\operatorname{Im}[y0]^2} + \\
& 1. \operatorname{Re}[x0]^2 + \frac{1. \operatorname{Im}[x0]^2 \operatorname{Re}[x0]^2}{\operatorname{Im}[y0]^2} \geq 0 \& -\operatorname{Im}[y0] + 1. \operatorname{Re}[x0] \leq 0.5 \Big) \mid \mid \left( \operatorname{Re}[y0] < -0.5 \& \right. \\
& \operatorname{Re} \left[ \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (-0.5 + y0)^2} + y0 \right] \geq \\
& 0.5 \& \\
& \operatorname{Re} \left[ y0 + \sqrt{0.25000000000000000000 + (-1.000000000000000000 + x0) x0 + (0.5 + y0)^2} \right] \geq \\
& -0.5 \& \operatorname{Im}[y0] < 0 \& \operatorname{Im}[x0] < 0 \& \\
& -\frac{0.5 \operatorname{Im}[y0]}{\operatorname{Im}[x0]} + 1. \operatorname{Re}[x0] + \frac{1. \operatorname{Im}[y0] \operatorname{Re}[y0]}{\operatorname{Im}[x0]} \geq 0.5 \& \operatorname{Re}[x0] > 0.5 \&
\end{aligned}$$

