$$\theta_a = \theta_b$$

$$\theta_a = \frac{-y_a}{r_a} \text{ and } \theta_b = \frac{y_b}{r_b}$$

$$r_a + r_b = c$$

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$$\theta_a = \theta_b$$
$$\frac{-y_a}{r_a} = \frac{y_b}{r_b}$$

$$r_a = -\frac{r_b \cdot y_a}{y_b}$$

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$$r_a = -\frac{r_b \cdot y_a}{y_b}$$
$$r_a + r_b = c$$

$$-\frac{r_b \cdot y_a}{y_b} + r_b = c$$
$$r_b \cdot \left(\frac{-y_a}{y_b} + 1\right) = c$$
$$r_b = \frac{c}{\left(\frac{-y_a}{y_b} + 1\right)}$$

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$$r_b = \frac{c}{\left(\frac{-y_a}{y_b} + 1\right)}$$
$$\theta_b = \frac{y_b}{r_b}$$

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$$d = r_b - \frac{c}{2}$$

$$\Delta_x = d \cdot \left( \cos(\theta) - 1 \right)$$
$$\Delta_y = d \cdot \sin(\theta)$$