



$$c^2 = a^2 + b^2 - 2ab \cos(\theta)$$

$$\theta = \cos^{-1} \left( \frac{a^2 + b^2 - c^2}{2ab} \right)$$

$$p_3 =$$

$$\theta_1^2 = \theta_2^2 + (l_1 - l_2)^2 - 2(l_1 - l_2)(l_1 - l_2) \cos(\theta_2) = 100^\circ$$

$$\theta_{h1} = 90 - \arccos \left( \frac{l_{h1}^2 + (l_1 - l_1)^2 - l_2^2}{2 l_{h1} (l_1 - l_1)} \right)$$

$$\theta_{a2} = \arccos \left( \frac{l_2^2 + (l_1 - l_1)^2 - l_{h1}^2}{2 l_2 (l_1 - l_1)} \right) - 90$$

$$\theta_{h2} = \theta_{a2} + \arccos \left( \frac{l_1^2 + l_{h2}^2 - l_3^2}{2 l_2 l_{h2}} \right)$$

$$\theta_{a3} = \theta_{a2} - \arccos \left( \frac{l_1^2 + l_3^2 - l_{h2}^2}{2 l_2 l_3} \right)$$