



$$x_0 = (b_2 * c_1 - c_2 * b_1) / d$$

$$y_0 = (a_1 * c_2 - c_1 * a_2) / d, \text{ age:}$$

$$a_1 = x_2 - x_1 \quad b_1 = y_2 - y_1$$

$$a_2 = x_3 - x_2 \quad b_2 = y_3 - y_2$$

$$c_1 = -a_1 * x_{21} - b_1 * y_{21}$$

$$c_2 = -a_2 * x_{23} - b_2 * y_{23}$$

$$d = b_1 * a_2 - b_2 * a_1$$

$$x_{21} = (x_2 + x_1) / 2 \quad y_{21} = (y_2 + y_1) / 2$$

$$x_{23} = (x_2 + x_3) / 2 \quad y_{23} = (y_2 + y_3) / 2$$