

$$\begin{pmatrix} x_R \\ y_R \end{pmatrix} = r \cdot \begin{pmatrix} \sin \gamma & -\cos \gamma \\ \cos \gamma & \sin \gamma \end{pmatrix} \begin{pmatrix} x_K \\ y_K \end{pmatrix} + \begin{pmatrix} t_x \\ t_y \end{pmatrix}$$

Scaling

Rotation

Translation