| | |
|---|---|
| **Affine transformation** | $\begin{cases} x = A_1 + A_2 u + A_3 v \\ y = B_1 + B_2 u + B_3 v \end{cases}$ |
| **Affine conformal** | $\begin{cases} x = A + Cu - Dv \\ y = B + Du + Cv \end{cases}$ |
| **Affine conformal Scale=1** | $\begin{cases} x = A + Cu - Dv \\ y = B + Du + Cv \end{cases}, \quad \sqrt{C^2 + D^2} = 1$ |
| **Projective transformation** | $\begin{cases} x = \dfrac{Au + Bv + C}{Gu + Hv + 1} \\ y = \dfrac{Du + Ev + F}{Gu + Hv + 1} \end{cases}$ |
| **Polynomial, degree 2** | $\begin{cases} x = A_1 + A_2 u + A_3 v + A_4 u^2 + A_5 uv + A_6 v^2 \\ x = B_1 + B_2 u + B_3 v + B_4 u^2 + B_5 uv + A_6 v^2 \end{cases}$ |
| **Polynomial, degree 3** | $\begin{cases} x = A_1 + A_2 u + A_3 v + A_4 u^2 + A_5 uv + A_6 v^2 \\ \quad A_7 u^3 + A_8 u^2 v + A_9 uv^2 + A_{10} v^2 \\ y = B_1 + B_2 u + B_3 v + B_4 u^2 + B_5 uv + B_6 v^2 \\ \quad B_7 u^3 + B_8 u^2 v + B_9 uv^2 + Bv^2 \end{cases}$ |
| **Polynomial, degree 4** | $\begin{cases} x = A_1 + A_2 u + A_3 v + A_4 u^2 + A_5 uv + A_6 v^2 \\ \quad A_7 u^3 + A_8 u^2 v + A_9 uv^2 + A_{10} v^2 \\ \quad A_{11} u^4 + A_{12} u^3 v + A_{13} u^2 v^2 + A_{14} uv^3 + A_{15} v^4 \\ y = B_1 + B_2 u + B_3 v + B_4 u^2 + B_5 uv + B_6 v^2 \\ \quad B_7 u^3 + B_8 u^2 v + B_9 uv^2 + B_{10} v^2 \\ \quad B_{11} u^4 + B_{12} u^3 v + B_{13} u^2 v^2 + B_{14} uv^3 + B_{15} v^4 \end{cases}$ |
| **Polynomial, degree 5** | $\begin{cases} x = A_1 + A_2 u + A_3 v + A_4 u^2 + A_5 uv + A_6 v^2 \\ \quad A_7 u^3 + A_8 u^2 v + A_9 uv^2 + A_{10} v^2 \\ \quad A_{11} u^4 + A_{12} u^3 v + A_{13} u^2 v^2 + A_{14} uv^3 + A_{15} v^4 \\ \quad A_{16} u^5 + A_{17} u^4 v + A_{18} u^3 v^2 + A_{19} u^2 v^3 + A_{20} uv^4 + A_{21} v^5 \\ y = B_1 + B_2 u + B_3 v + B_4 u^2 + B_5 uv + B_6 v^2 \\ \quad B_7 u^3 + B_8 u^2 v + B_9 uv^2 + B_{10} v^2 \\ \quad B_{11} u^4 + B_{12} u^3 v + B_{13} u^2 v^2 + B_{14} uv^3 + B_{15} v^4 \\ \quad B_{16} u^5 + B_{17} u^4 v + B_{18} u^3 v^2 + Bu^2 v^3 + B_{20} uv^4 + B_{21} v^5 \end{cases}$ |