

$$\begin{aligned}
p0 &= \begin{bmatrix} V_{v0,1} & V_{v0,2} & V_{v0,3} \end{bmatrix} \\
p1 &= \begin{bmatrix} V_{v1,1} & V_{v1,2} & V_{v1,3} \end{bmatrix} \\
p2 &= \begin{bmatrix} V_{v2,1} & V_{v2,2} & V_{v2,3} \end{bmatrix} \\
x0s &= \|p0\|_F^2 \\
Mi &= \begin{bmatrix} 2(p1 - p0) \\ 2(p2 - p0) \\ n^T \end{bmatrix}^{-1} \\
m &= Mi \left( \|p1\|_F^2 - x0s, \|p2\|_F^2 - x0s, p0 \cdot n \right)
\end{aligned}$$

where

- $v0 \in \mathbb{Z}$  index
- $v1 \in \mathbb{Z}$  index
- $v2 \in \mathbb{Z}$  index
- $V_i \in \mathbb{R}^3$
- $n \in \mathbb{R}^3$