1. Given a matrix

$$F = \begin{bmatrix} 1 & 2/\sqrt{3} & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

(1) F=RU , Find R and U
(2) F=VR , Find V
(3) F= Σ ^{T} , Find , and Σ
(4) Verify R= ^{T}

Reference : J.T.Chen, C.F.Lee and S.Y.Lin
    A new point of view for the polar decomposition using
    singular value decomposition, Int.J.Comp.Numer.Anal.Appl.,to Apear,
    2002.