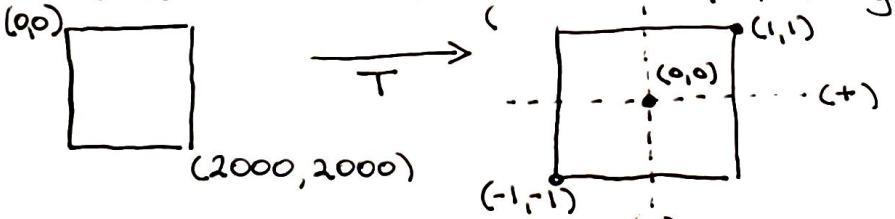
- Pseudocode of 8 point algorith...

```
X' = n×3 point coordinates.
X" = ↗
for i in range (0... len(x')) # len(x') == len(x") should be
   A(n,:)= kron(x"(n,:),x'(n,:)) # true.
end
U, D, V = SVD(A)
f = reshape(V(:,9), 3, 3)
U, D, V = SVD(f)
F = U* diag(D(1,1), D(2,2), 0)* V.T
```

- Cons of 8 point algorithm.

1. Issue with large pixel coord.. Example $\begin{bmatrix}2000\\1500\\1\end{bmatrix}$, instead we want $\begin{bmatrix}0.9\\0.5\\1\end{bmatrix}$.

Performing normalization on the coord. sys. improves the stability.
So what we do is transform, T, n by m image to -1 by 1.



Then we can transform points using T and revert the scaled F_s to F using T as well.

We can think of it this way $X_s'^T F_s X_s'' = 0$ and then $F = T^T F_s T$, where $X_s = TX$.

2. Singularity, $\det(F) = 0$.

- That is rank of matrix A is less than 8.
- There is no translation, its zero. This means projection centers are the same.

→ This can happen if we have collinear set of points.

As we can see the point lie on one plane.