Affine and Metric Correction of Image

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Problem Statement

- Take image as input and perform *affine correction*.
- Take image as input and perform *metric correction*.

Implementation

1. For affine correction, 2 sets of *parallel lines* were manually detected.
2. Each set gives us a corresponding *vanishing point*, giving us the *vanishing line*.
3. This vanishing line (l_1, l_2, l_3) is then mapped to *line at infinity* using:

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 1 \\ l_1 & l_2 & l_3 \end{bmatrix}$$

4. For metric correction, we use the same 4 points as mentioned,
5. These 4 points are mapped to an *approximate square*.

Results

- Concatenated *Image,Affine_Correct,Metric_Correct* image are present in *CorrectedImage directory*.