**Lab #1**

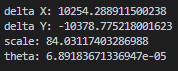
**Similarity Transformation**

Image 1:

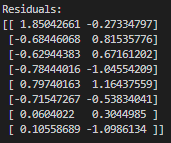
Linear Parameters:



Non-Linear Parameters:



Residuals: (rx, ry)



RSME:



Transformation Residuals:

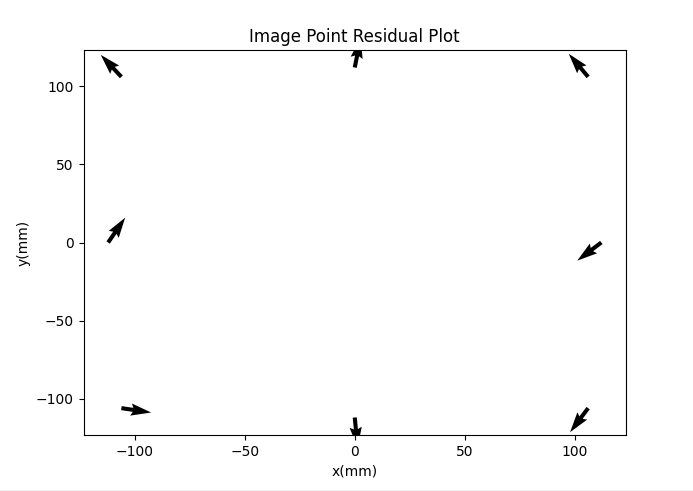
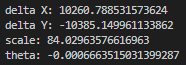


Image 2:

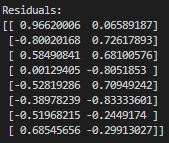
Linear Parameters:



Non-Linear Parameters:



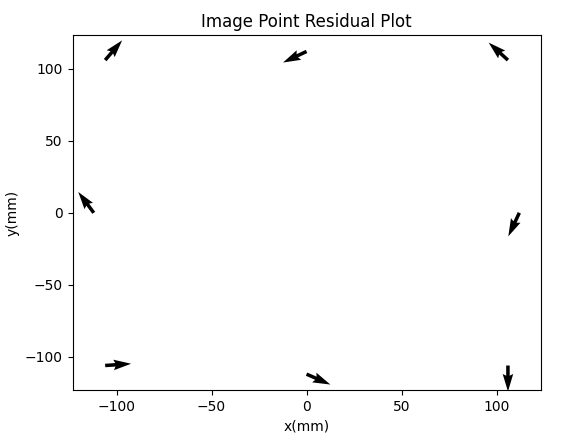
Residuals: (rx, ry)



RSME:



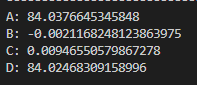
Transformation Residuals:



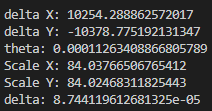
**Affine Transformation**

Image 1:

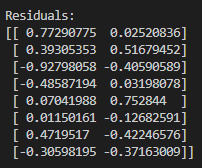
Linear Parameters:



Non-Linear Parameters:



Residuals: (rx, ry)



RSME:



Transformation Residuals:

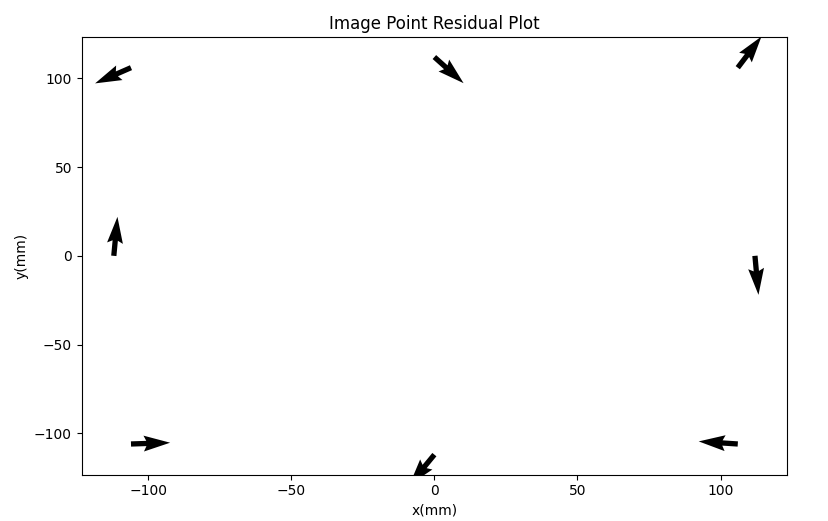
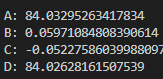
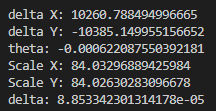


Image 2:

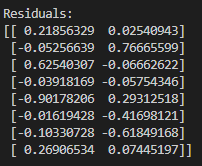
Linear Parameters:



Non-Linear Parameters:



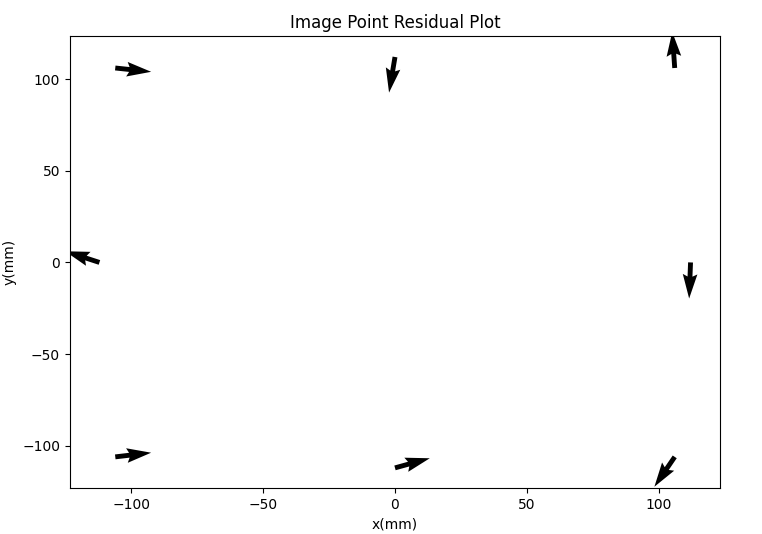
Residuals: (rx, ry)



RSME:



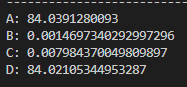
Transformation Residuals:



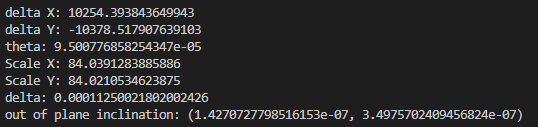
**Projective Transformation**

Image 1:

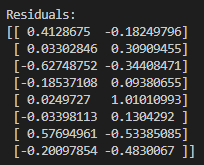
Linear Parameters:



Non-Linear Parameters:



Residuals: (rx, ry)



RSME:



Transformation Residuals:

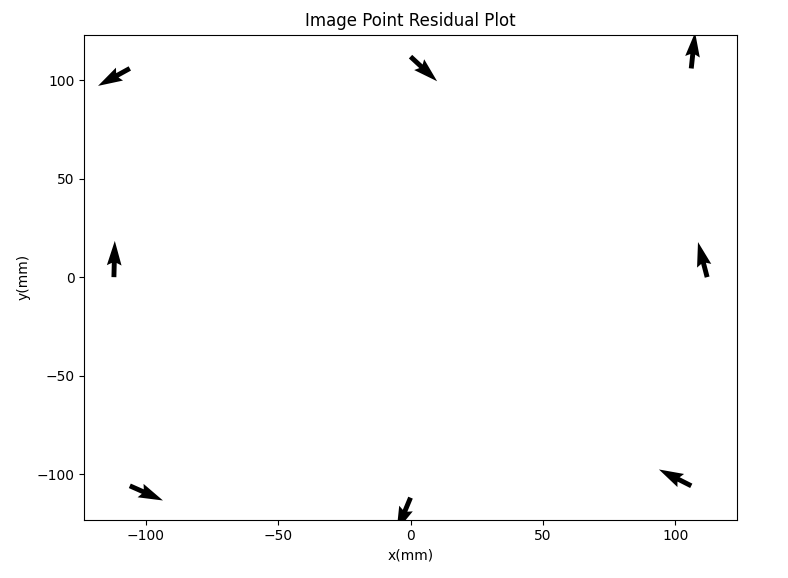
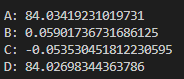
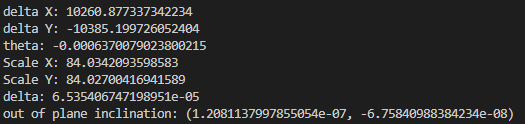


Image 2:

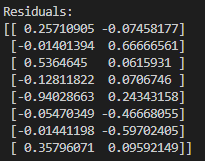
Linear Parameters:



Non-Linear Parameters:



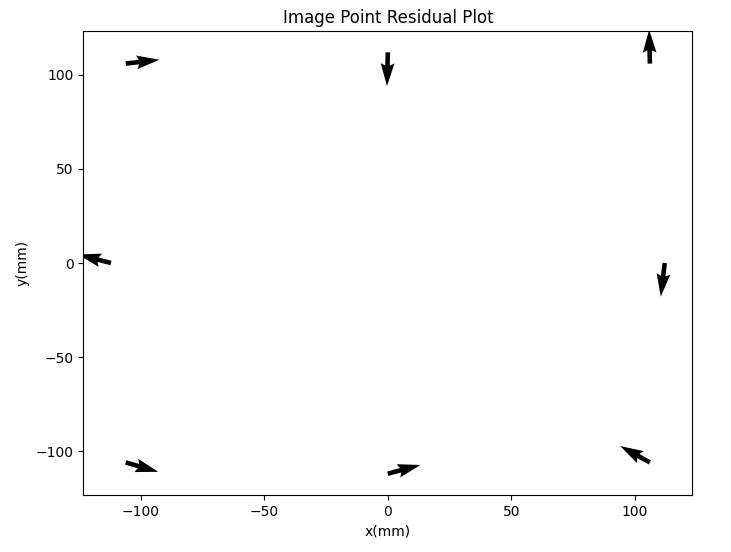
Residuals: (rx, ry)



RSME:



Transformation Residuals:



Questions:

1. For each of the Tasks above, are there any noticeable patterns in the residuals for any of the transformations and for any of the images?
2. Do the two images have comparable transformation parameters in each of the above tasks? If no, why would there be differences in the derived transformation values?

Between the two images for each transformation, their linear and non-linear parameters are fairly close to each other.

1. Given the results from Tasks 1, 2 and 3, which transformation should be used for observations from this camera/comparator system? Justify your answer and explain your reasoning.