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Take-Home final

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1. Define what is affine transformation?

An affine transformation is something that can be applied to individual points or lines. Parallel lines remain parallel after an affine transformation is performed. Affine transformations examples include rotations, translations, ad scaling. It can also be mentioned that affine transformations are transformations that preserve collinearity.

1. Given the following 2-D Affine Transformation, an image of a spaceship is placed inside an imaginary window.
   1. Show a sequence of affine transformations that can be applied to the left image spaceship to generate the right image. You can use the following affine transformations
      1. A sequence of transformations you can use would be: Translate to the origin, rotate -90 (clockwise), followed by a final translation to the new points.

\*= (This translation takes it to the origin)

\*, 🡪 (After the rotation)

\* = (This translation moves it to the final destination)

* 1. From your result of part a, compute a single transformation matrix that can be applied to the left image to produce the right image in one single step. We refer this as “Combo” Matrix in our lecture

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