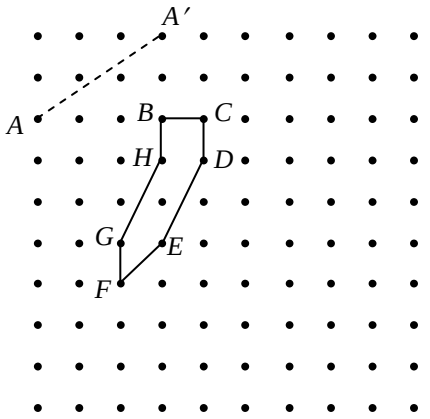
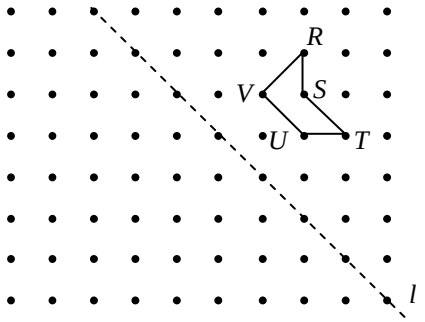
Supplemental Assignment 16: Transformations 1

1. For the translation that maps A to A', sketch the image of the figure below.



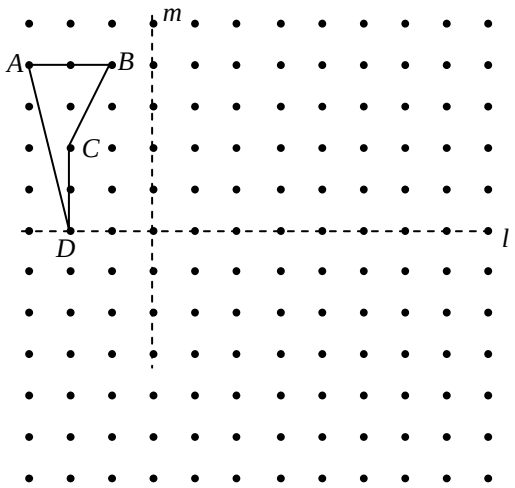
2. For the translation that maps C to E in the figure above, sketch the image of the figure.

3. Sketch the image of the pentagon below for a reflection about the line l.



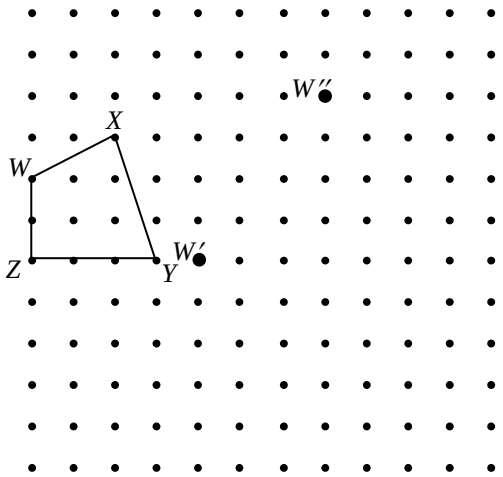
4. Sketch the image of the pentagon above for a reflection about the line containing T and U.

5. Sketch the image of quadrilateral $ABCD$ for the reflection about line l. Label the image $A'B'C'D'$. Next, sketch the image of $A'B'C'D'$ for the reflection about line m. Label the image $A''B''C''D''$.



6. Can you discover a *single* transformation that would map *ABCD* directly to *A′B″C′D′*? Describe it as carefully and specifically as you can.

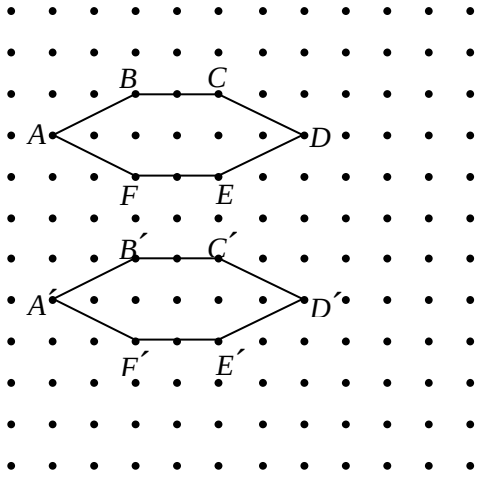
7. Map quadrilateral *WXYZ* to quadrilateral *W′X′Y′Z′* by a translation that maps *W* to *W′*. Then map *W′X′Y′Z′* to quadrilateral *W″X″Y″Z″* by a translation that maps *W′* to *W″*.



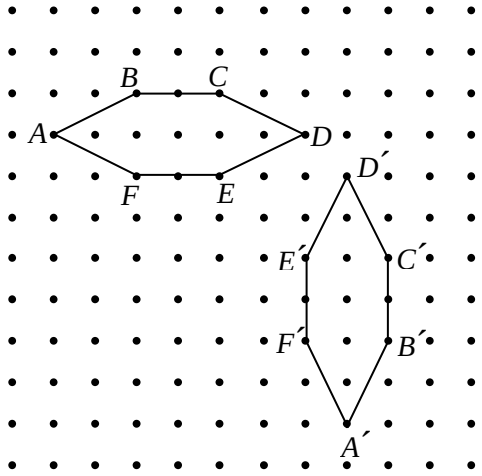
8. The translation that maps *W* to *W′* can be described as "right 4 and down 2." The translation that maps *W′* to *W″* is "right 3 and up 4." Describe the translation that maps *W* to *W″*.

9. Identify which transformation (translation or reflection) would change each hexagon *ABCDEF* to the image *A´B´C´D´E´F´*. For an answer of "translation," describe the translation. For an answer of "reflection," sketch the line of reflection.

(a)



(b)



(c)