$\qquad$ Per: $\qquad$

1. Construct the lines of reflection for A to $A^{\prime}, A^{\prime}$ to $A^{\prime \prime}$, and $A$ to $A^{\prime \prime}$.

2. Reflect all of the figures across the line $y=-2 x+3$.
a.

b.
c.


3. Rotate the original images in \#3 as follows: a) $180^{\circ}$, b) $90^{\circ}$, c) $270^{\circ}$, d) $45^{\circ}$. Show all marks.
4. Given a in \#3, what would be the points if applying the translation rule $(x, y)=>(x+4, y+3)$ ? $\qquad$ , $\qquad$ -.


Xander hired SkyRighters Inc. to write about his favorite subject for all of VHMS to see. (Show ALL construction marks for the following. Write the MATH as it would appear in each transformation.)
7. When the skywriters programed the word, they entered the data backwards since they read it from the ground. Reflect the shape with the words over the line $\mathbf{y}=\mathbf{1 / 3} \mathbf{x}+\mathbf{8}$ to read the word correctly from below.
8. Since it was upside down, rotate the shape (and word) $180^{\circ}$ about the front of the school (VHMS).
9. Translate the shape so that the A is directly over the school. (Write the translation rule: $\qquad$ .)

