

PROBLEM-OF-THE-DAY: ALGEBRA 1**WEEK:** January 14 to January 18**DAY:** Friday

RISD Objective: Given a figure in the coordinate plane, students will be able to determine the coordinates of its image after it has undergone a translation, reflection, 180° rotation about the origin, or dilation.

PROBLEM #86

Vera is asked to find the coordinates of a triangle after it has been translated 4 units to the right. The coordinates of the original triangle are $(-10, 0)$, $(1, 4)$, and $(-1, -5)$. Vera claims that the coordinates of the translated triangle are $(-6, 4)$, $(5, 8)$, and $(3, -1)$. Explain Vera's mistake. What should the correct coordinates have been?

MODEL SOLUTION #86

Vera added four to both the x- and y-parts of the coordinates. Since it was only a horizontal translation, she should have only added four to the x-part of the coordinate. The correct answer should have been (-6, 0), (5, 4), and (3, -5).