Lesson 5.2.1: Defining Rotations, Reflections, and Translations

Warm-Up 5.2.1

You are creating a quilting pattern and need to transform a triangle to create your design. Given $\triangle ABC$ with A (5, 8), B (9, 1), and C (–1, 2) as well as the functions $R_{90}(x, y) = (-y, x)$ and $r_{x\text{-axis}}(x, y) = (x, -y)$:

1. What are the coordinates of the vertices after $r_{x\text{-axis}}(\triangle ABC) = \triangle A'B'C'$?

2. What are the coordinates of the vertices after $R_{90}(\triangle A'B'C')$?

3. Are the coordinates of the vertices different if the function R_{90} is taken before $r_{x\text{-axis}}$?

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