

NAME: _____

UNIT 5 • TRANSFORMATIONS IN THE COORDINATE PLANE

Lesson 2: Defining and Applying Rotations, Reflections, and Translations

Problem-Based Task 5.2.1: Painting Surfboards

At a surfboard manufacturer, a conveyor belt moves the board along through a paint sprayer. A mechanical arm then rotates the board 90° and puts it back on the conveyor belt. Then, the surfboard is pushed one more full length through another paint sprayer and the arm again rotates the board 90° . Using the variable b for the board, the function C for the motion of the conveyor belt, and the function A for the action of the arm rotating the board 90° , describe the equation to paint a surfboard completely.

- How many times must the procedure be done to paint both sides of the board?
- What transformation describes the motion of the conveyor belt?
- What transformation describes the action of the arm?
- Using the variable b for the board, the function C for the motion of the conveyor belt, and the function A for the action of the arm rotating the board 90° , what is the equation to paint a surfboard completely?