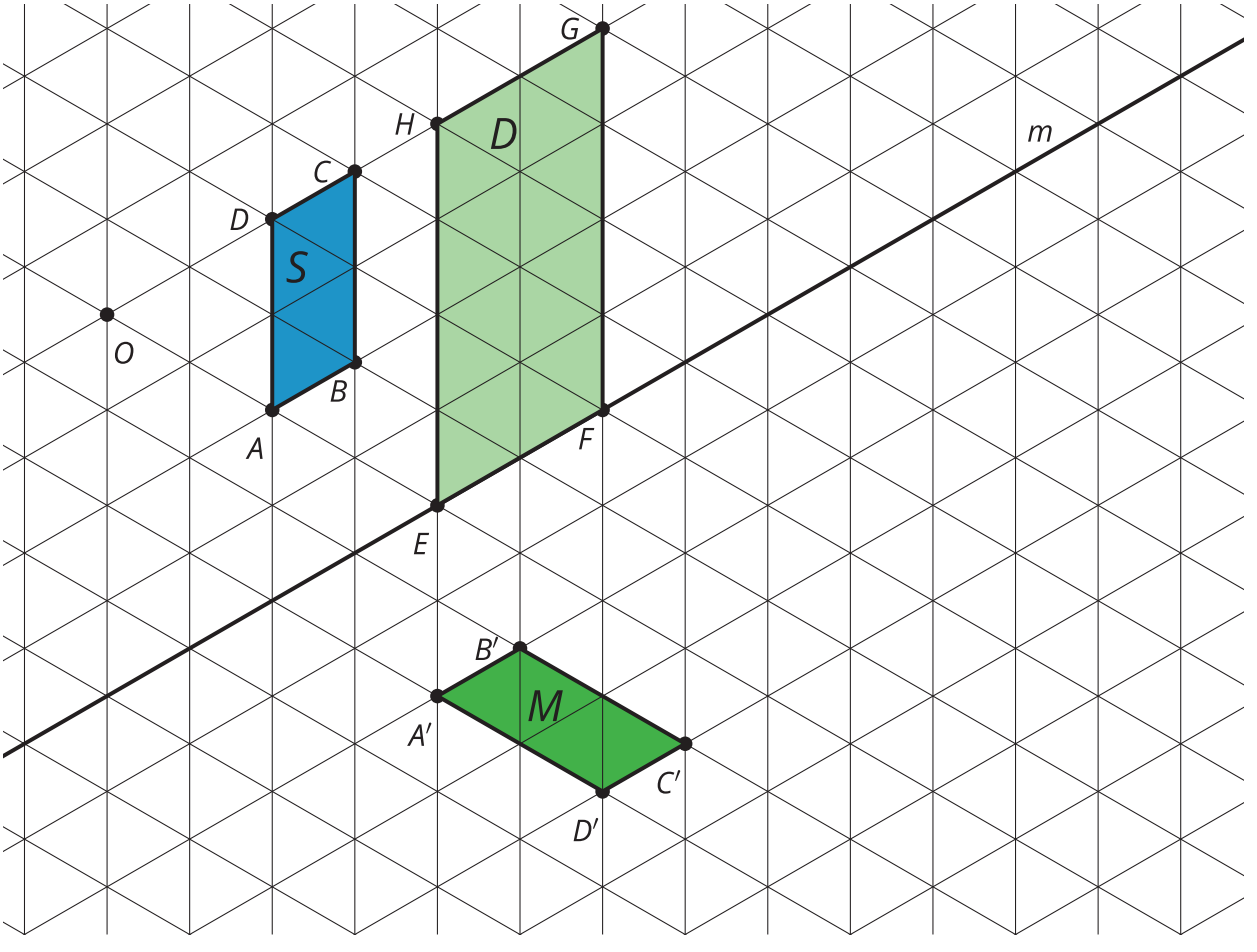
# Unit 1 Lesson 10: Rigid Transformations

## 1 Notice and Wonder: Transformed (Warm up)

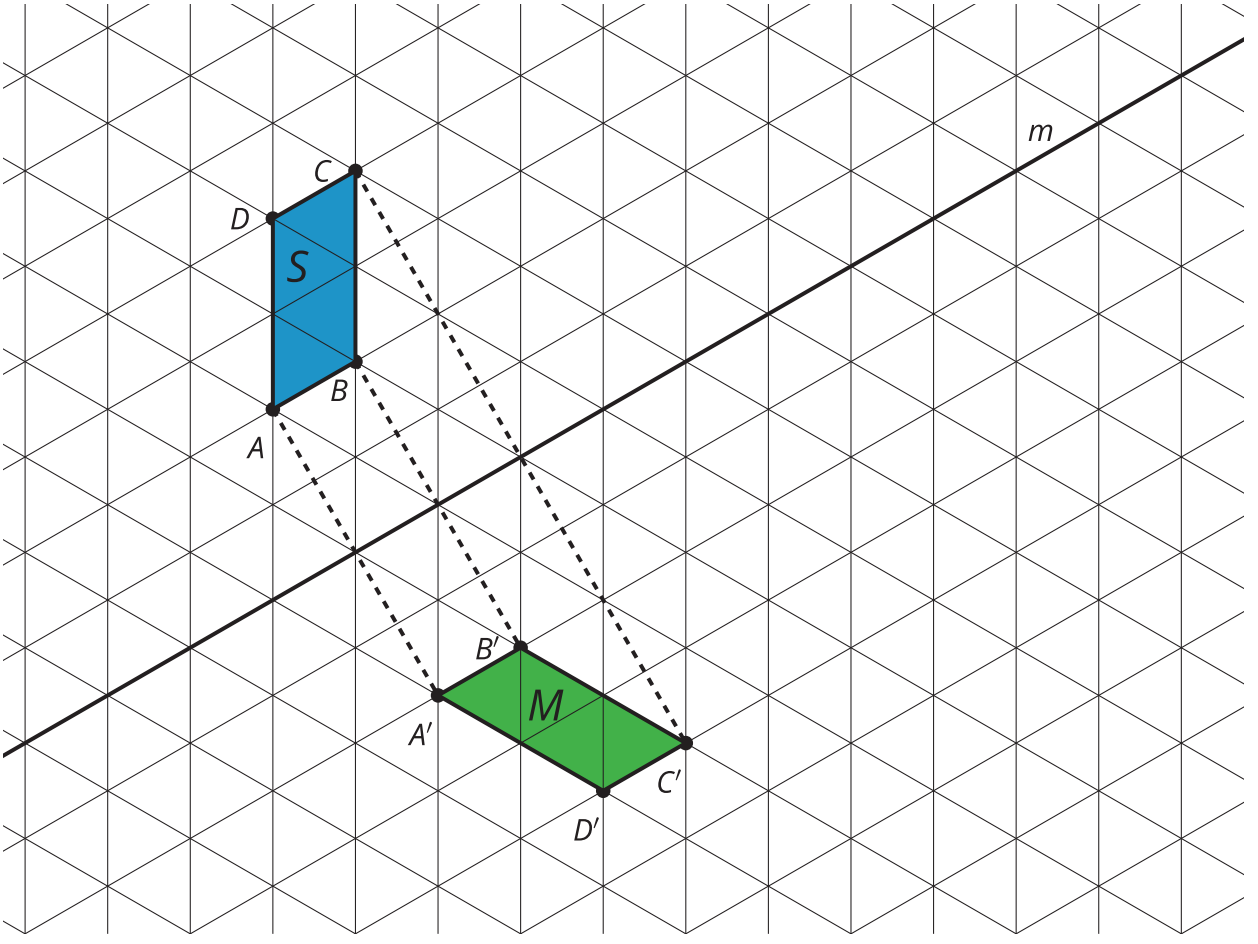
### Student Task Statement

What do you notice? What do you wonder?

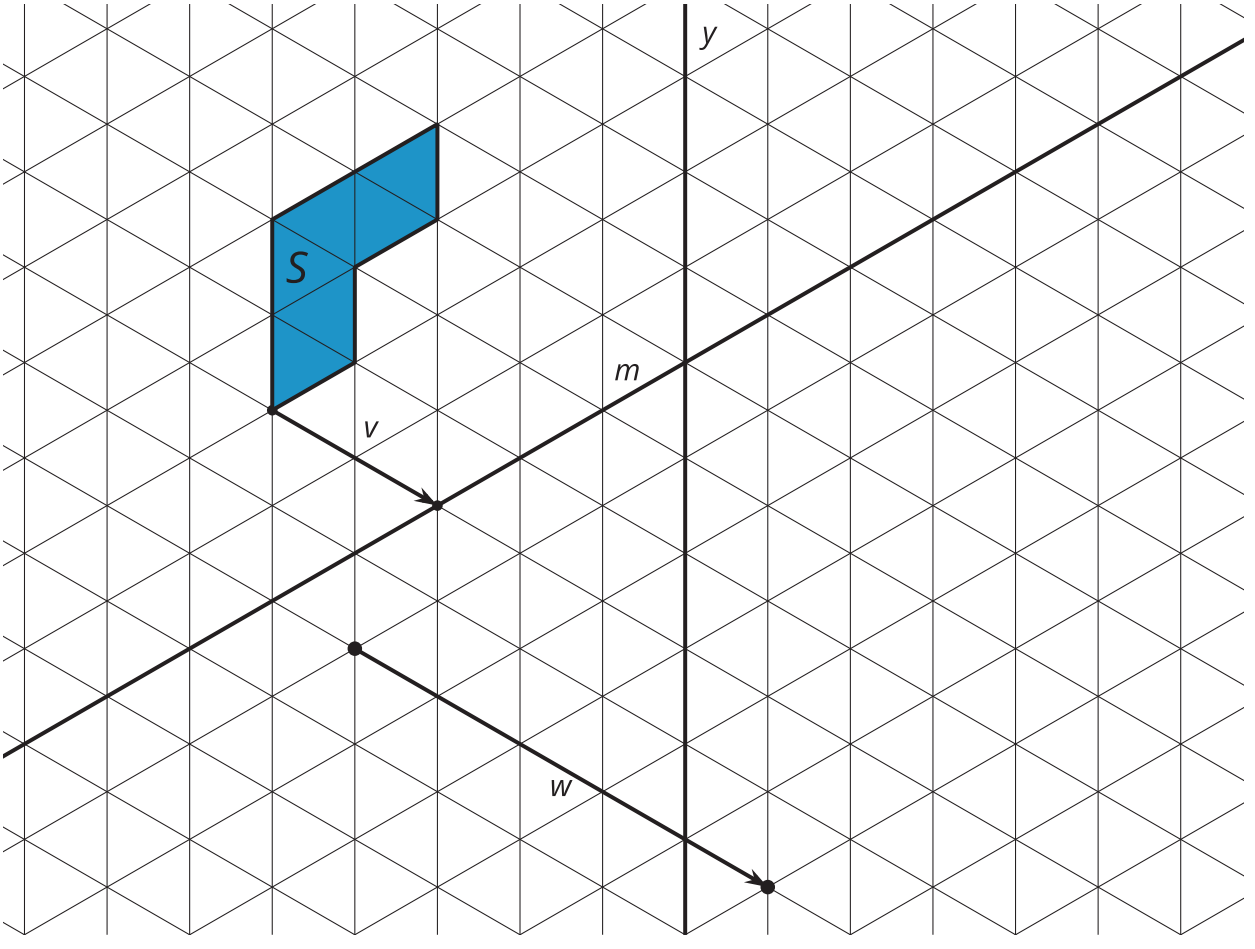


## 2 What's the Same?

### Images for Launch



**Student Task Statement**



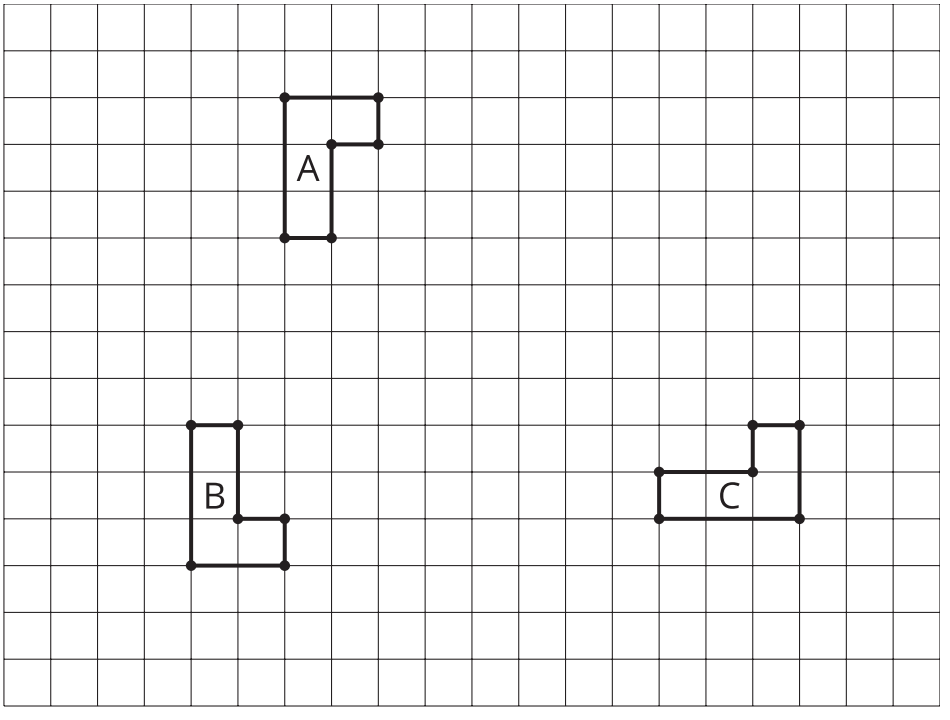

Draw each **rigid transformation** in a different color.

1. **Translate** figure $S$ along the line segment $v$ in the direction shown by the arrow. Color: _____
2. **Reflect** figure $S$ across line $y$. Color: _____
3. Reflect figure $S$ across line $m$. Color: _____
4. Translate figure $S$ along the line segment $w$ in the direction shown by the arrow. Reflect this **image** across line $y$. Color: _____
5. How are the images the same? How are they different?

# 3 Does Order Matter?

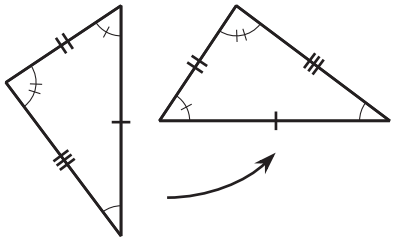
## Student Task Statement

Here are 3 **congruent** L shapes on a grid.




1. Describe a sequence of transformations that will take Figure $A$ onto Figure $B$.
2. If you reverse the order of your sequence, will the reverse sequence still take $A$ onto $B$?
3. Describe a sequence of transformations that will take Figure $A$ onto Figure $C$.
4. If you reverse the order of your sequence, will the reverse sequence still take $A$ onto $C$?

## Images for Activity Synthesis



$\triangle EDC \cong \triangle E'D'C'$