

Warmup 2/ $(\pi + (20 - \pi))$

- **DO WEDNESDAY'S WARMUP! EARLY FINISHERS – TRY FRIDAY!!!**
- **PLEASE GET THE FOLLOWING SUPPLIES:**
 - **Protractor**
 - **2 sheets of patty paper**

Solve the system of equations. Check your answer.

$$\begin{cases} -2x + 3y = -4 \\ 3x + 18y = 51 \end{cases}$$

Check Homework



Check for Understanding – Translations, Reflections, Rotations



Translations with Patty Paper

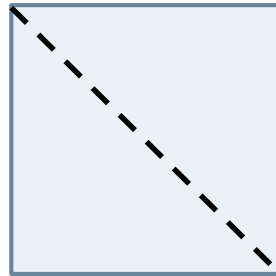
- Trace the triangle. Then translate it any direction you want. Do your best to make sure it doesn't turn at all!
- **NOTE: YOU WILL NEED TO TRANSFER THE SHAPE BACK ONTO THE ORIGINAL PAPER.** This is easiest if you put your paper over something soft, like a binder or a notebook. You can indent into the paper or even poke small holes. It will not work well on a flat desk!

On the graph:

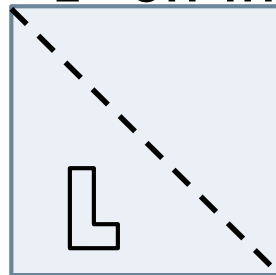
- Trace triangle ABC. Use your patty paper to translate it **two units to the right**.
- Now translate your image **four units left and 5 units down**.
- (Yes, I know you know how to do this without patty paper. But I would like you to use it for this problem!)

On your patty paper...

1. Position your paper like this: (ignore your first shape)



2. Draw a capital “L” on the paper like so:



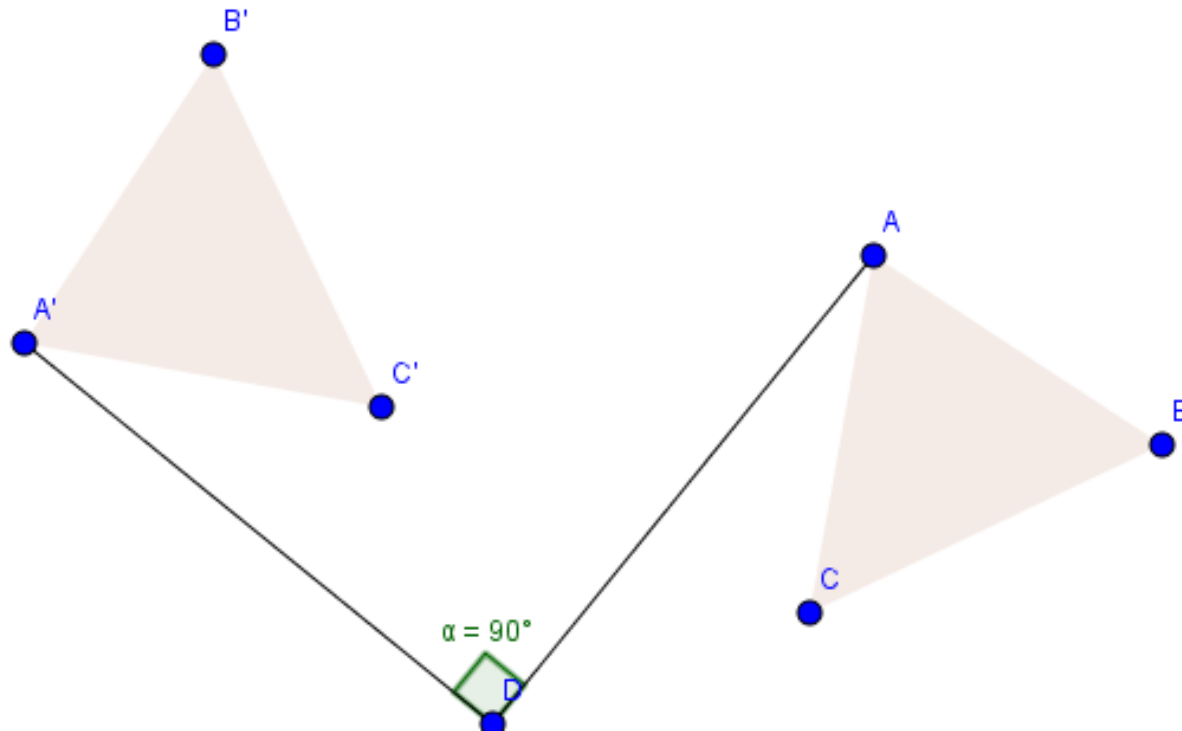
3. **WITHOUT FOLDING IT YET**, draw another capital “L” where you think it will end up.
4. Fold the paper now and trace the “L” onto the back to see how close you were.

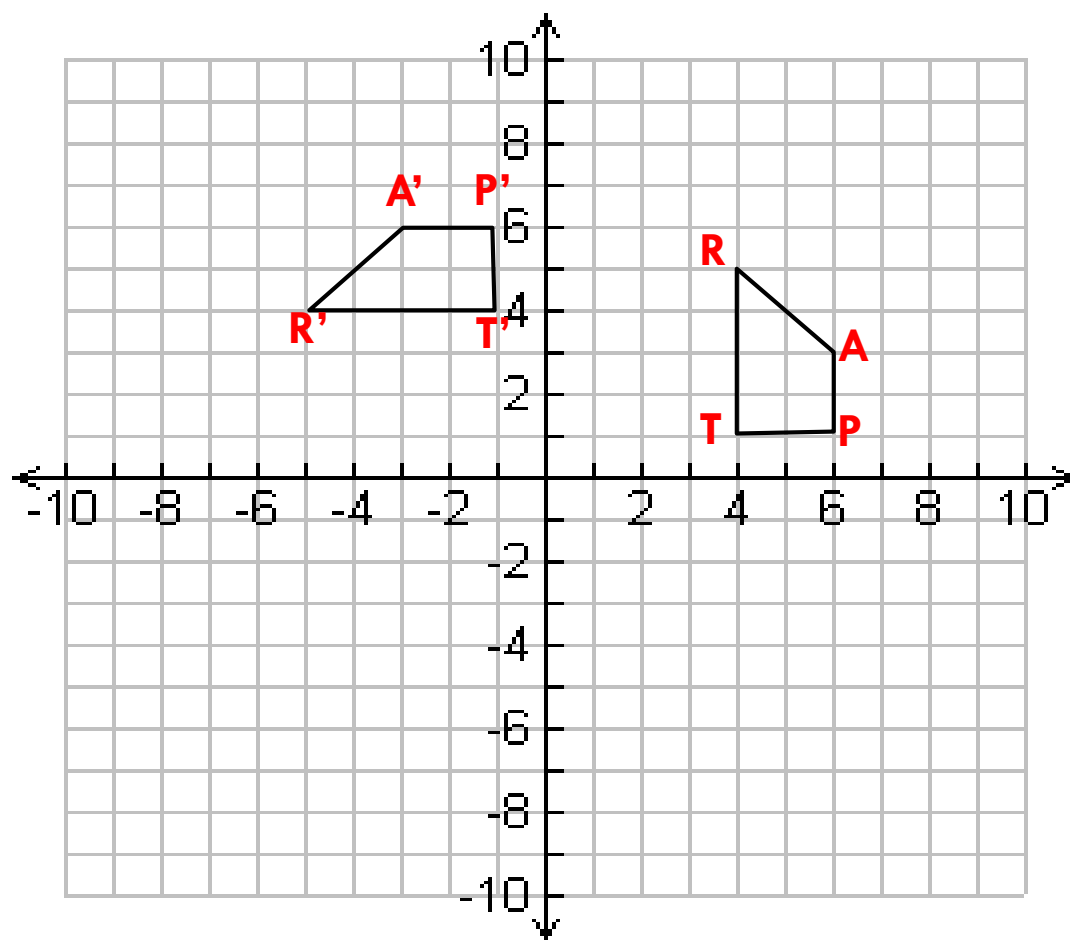
Reflecting one from a separate sheet of paper...

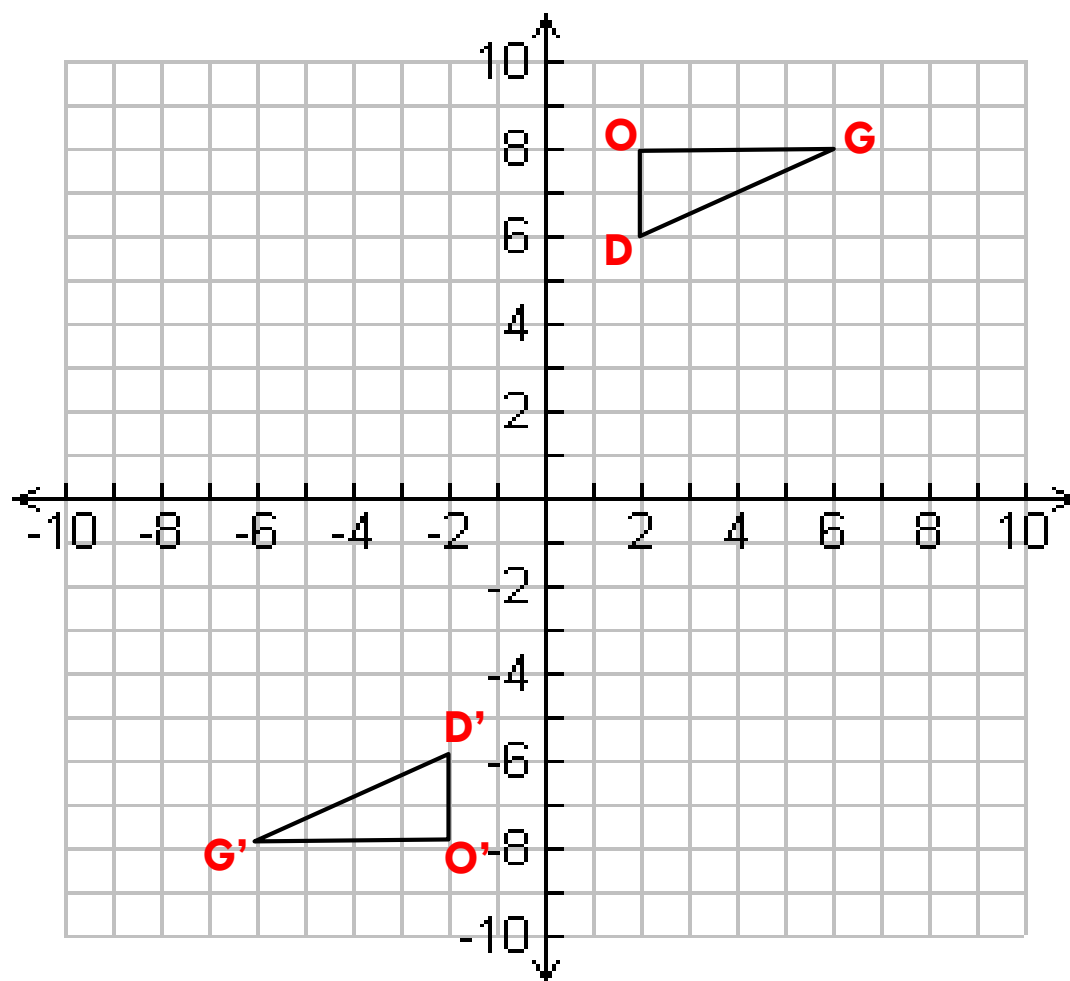
1. Trace the trapezoid **and the line of reflection.**
2. Fold the paper along the line of reflection.
3. Trace the trapezoid onto the other side, then open the patty paper back up.
4. Find a way to transfer the image back onto the original paper.

Rotations

- All angles with the vertex as the center of rotation formed by a point and its image have the same measure. This angle measure is the **angle of rotation**





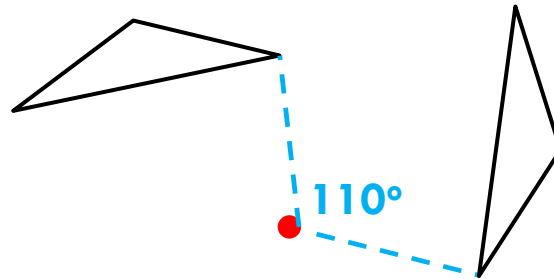


Using patty paper to perform a rotation

- Look at the triangle at the top of your paper. There is a point below it, called the point of rotation.
- We are going to **ROTATE** the triangle 50 degrees clockwise around this central point.
 1. Pick one of the vertices on your triangle. It can be any vertex. Use your ruler to connect this point to the central point.
 2. Use your protractor to create a 50° clockwise angle, using your segment as one of the sides.
 3. Use your patty paper to trace your triangle **and** this new segment.
 4. Turn your patty paper so that the segment rotates from one side of the angle to the other.
 5. Use your pencil to press really hard into the patty paper at the vertices of your new shape. Then remove the patty paper and connect these three marks to form your rotated triangle!

Using patty paper to perform a rotation

- Rotate the second triangle 110 degrees counterclockwise.



TONIGHT: ALEKS transformations homework

- When you log in to ALEKS, in the lower left hand corner, you will see “Transformations Homework”
- There are 12 questions. It will show you your score when you finish. This is the score I will enter into the gradebook.
- You may retake missed questions to raise your score.
- You may redo them as many times as you want until you get up to 100%.
- This assignment is due TOMORROW!
- (This will not count towards your 30 minutes. Please do not do your 30 minutes on the same day that you do this assignment, because I won't be able to tell minutes are which)