

6.3 Leap Frog

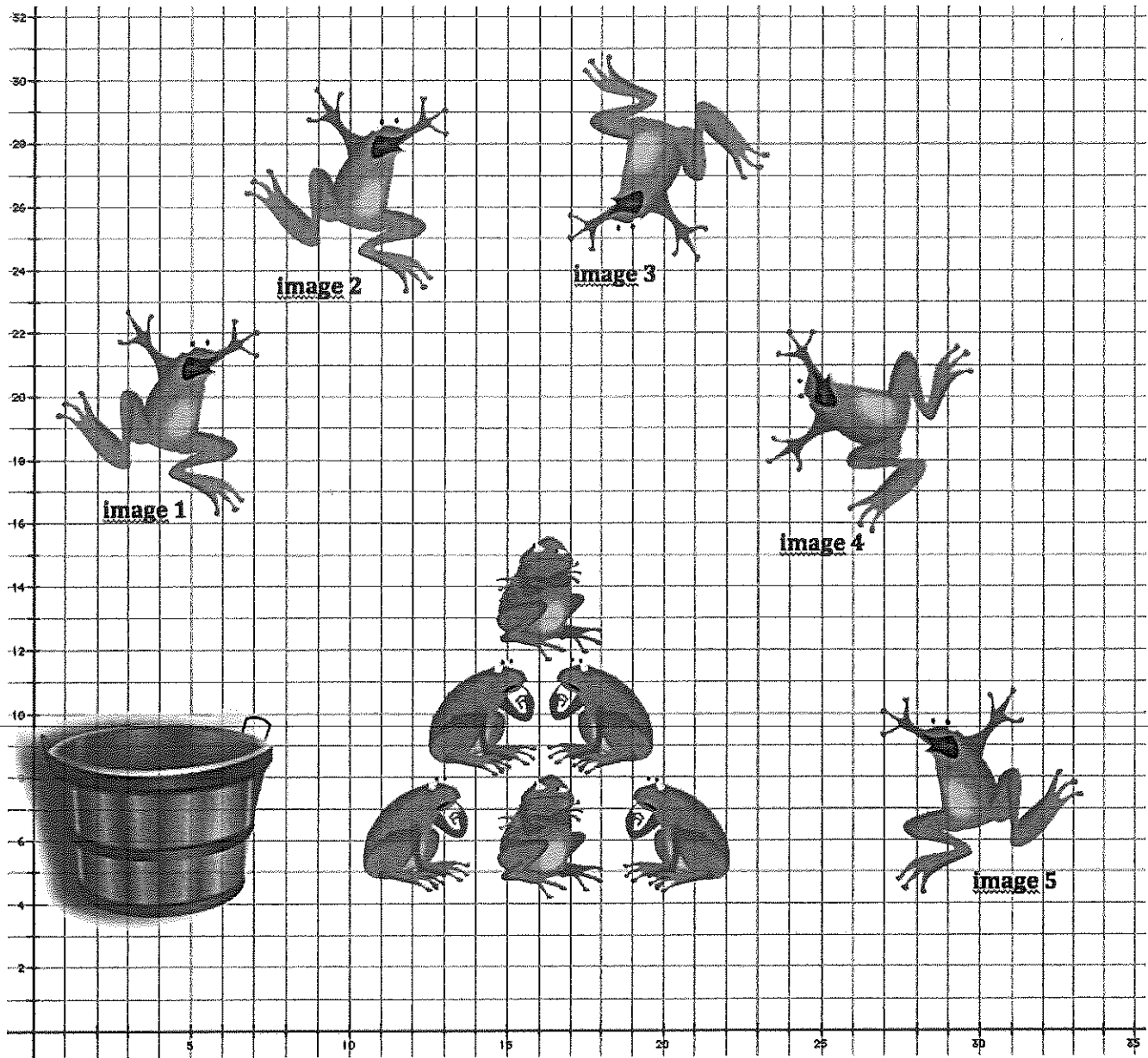
A Solidify Understanding Task

Josh is animating a scene in which a troupe of frogs is auditioning for the Animal Channel reality show, "The Bayou's Got Talent". In this scene the frogs are demonstrating their "leap frog" acrobatics act. Josh has completed a few key images in this segment, and now needs to describe the transformations that connect various images in the scene.

For each pre-image/image combination listed below, describe the transformation that moves the pre-image to the final image.

- If you decide the transformation is a rotation, you will need to give the center of rotation, the direction of the rotation (clockwise or counterclockwise), and the measure of the angle of rotation.
- If you decide the transformation is a reflection, you will need to give the equation of the line of reflection.
- If you decide the transformation is a translation you will need to describe the "rise" and "run" between pre-image points and their corresponding image points.
- If you decide it takes a combination of transformations to get from the pre-image to the final image, describe each transformation in the order they would be completed.

| Pre-image | Final Image | Description |
|-----------|-------------|-------------|
| image 1 | image 2 | |
| image 2 | image 3 | |
| image 3 | image 4 | |
| image 1 | image 5 | |
| image 2 | image 4 | |



images this page:

CC0 <http://openclipart.org/detail/33781/architetto>

CC0 <http://openclipart.org/detail/33979/architetto>

CC0 <http://openclipart.org/detail/33985/architetto>

CC0 <http://openclipart.org/detail/170806/hataiar205>

READY, SET, GO!

Name _____

Period _____

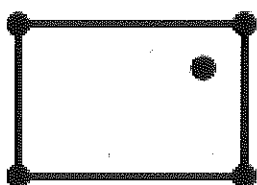
Date _____

READY

Topic: Rotations and Reflections of figures.

In each problem there will be a pre-image and several images based on the give pre-image. Determine which of the images are rotations of the given pre-image and which of them are reflections of the pre-image. If an image appears to be created as the result of a rotation and a reflection then state both. (Compare all images to the pre-image.)

1.



Pre-Image

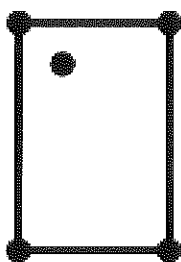


Image A

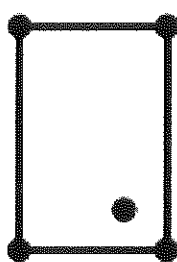


Image B

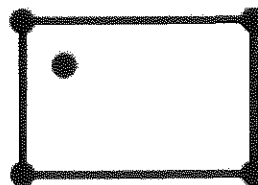


Image C

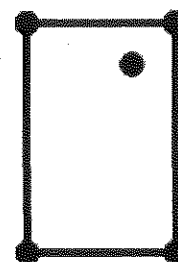
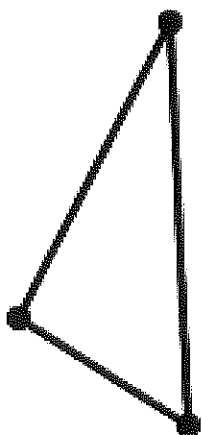


Image D

2.



Pre-Image

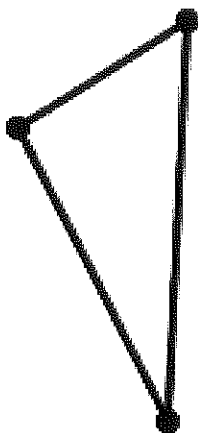


Image A

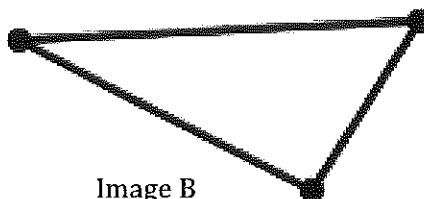


Image B

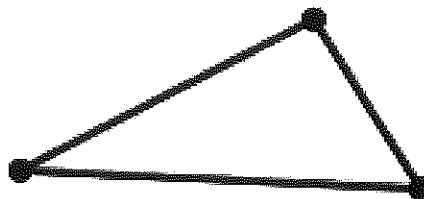


Image C

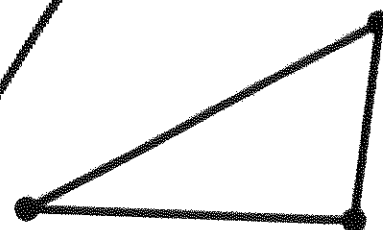


Image D

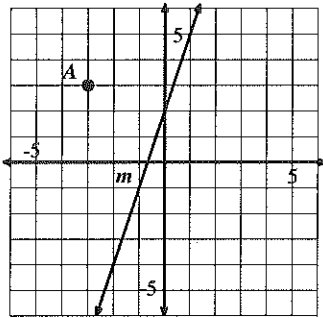
SET

Topic: Reflecting and rotating points.

On each of the coordinate grids there is a labeled point and line. Use the line as a line of reflection to reflect the given point and create its reflected image over the line of reflection.

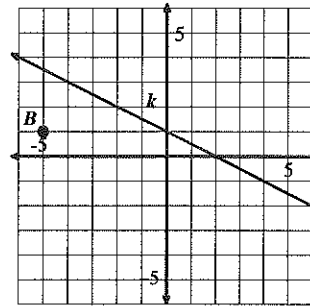
(Hint: points reflect along paths perpendicular to the line of reflection. Use perpendicular slope!)

3.



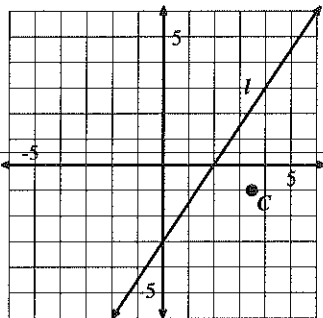
Reflect point A over line m and label the image A'

4.



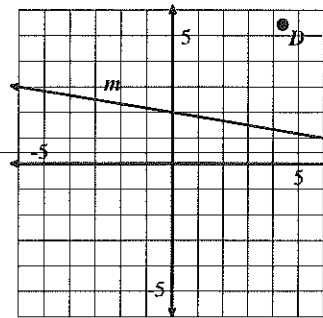
Reflect point B over line k and label the image B'

5.



Reflect point C over line l and label the image C'

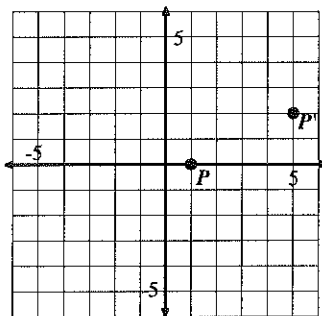
6.



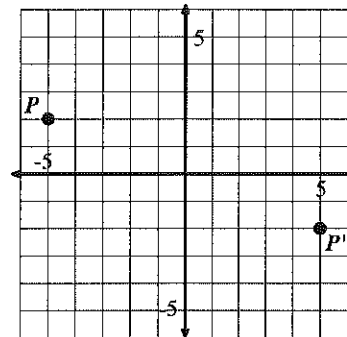
Reflect point D over line m and label the image D'

For each pair of point, P and P' draw in the line of reflection that would need to be used to reflect P onto P' . Then find the equation of the line of reflection.

7.

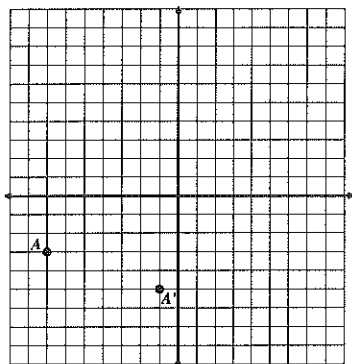


8.

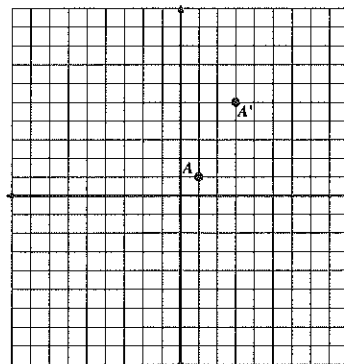


For each pair of point, A and A' draw in the line of reflection that would need to be used to reflect A onto A' . Then find the equation of the line of reflection.

9.



10.



GO

Topic: Slopes of parallel and perpendicular lines and finding slope and distance between two points.

For each linear equation write the slope of a line parallel to the given line.

11. $y = -3x + 5$

12. $y = 7x - 3$

13. $3x - 2y = 8$

For each linear equation write the slope of a line perpendicular to the given line.

14. $y = -\frac{2}{7}x + 5$

15. $y = \frac{1}{5}x - 4$

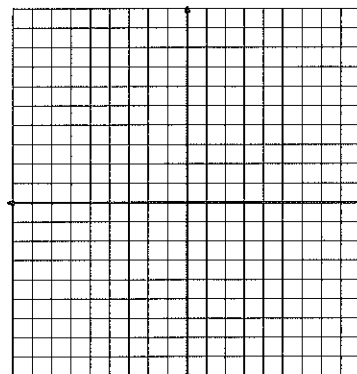
16. $3x + 5y = -15$

Find the *slope* between each pair of points. Then, using the Pythagorean Theorem, find the *distance* between each pair of points. You may use the graph to help you as needed.

17. $(-2, -3)$ $(1, 1)$

a. Slope:

b. Distance:



18. $(-7, 5)$ $(-2, -7)$

a. Slope:

b. Distance: