



## Lesson 3 Leap Frog

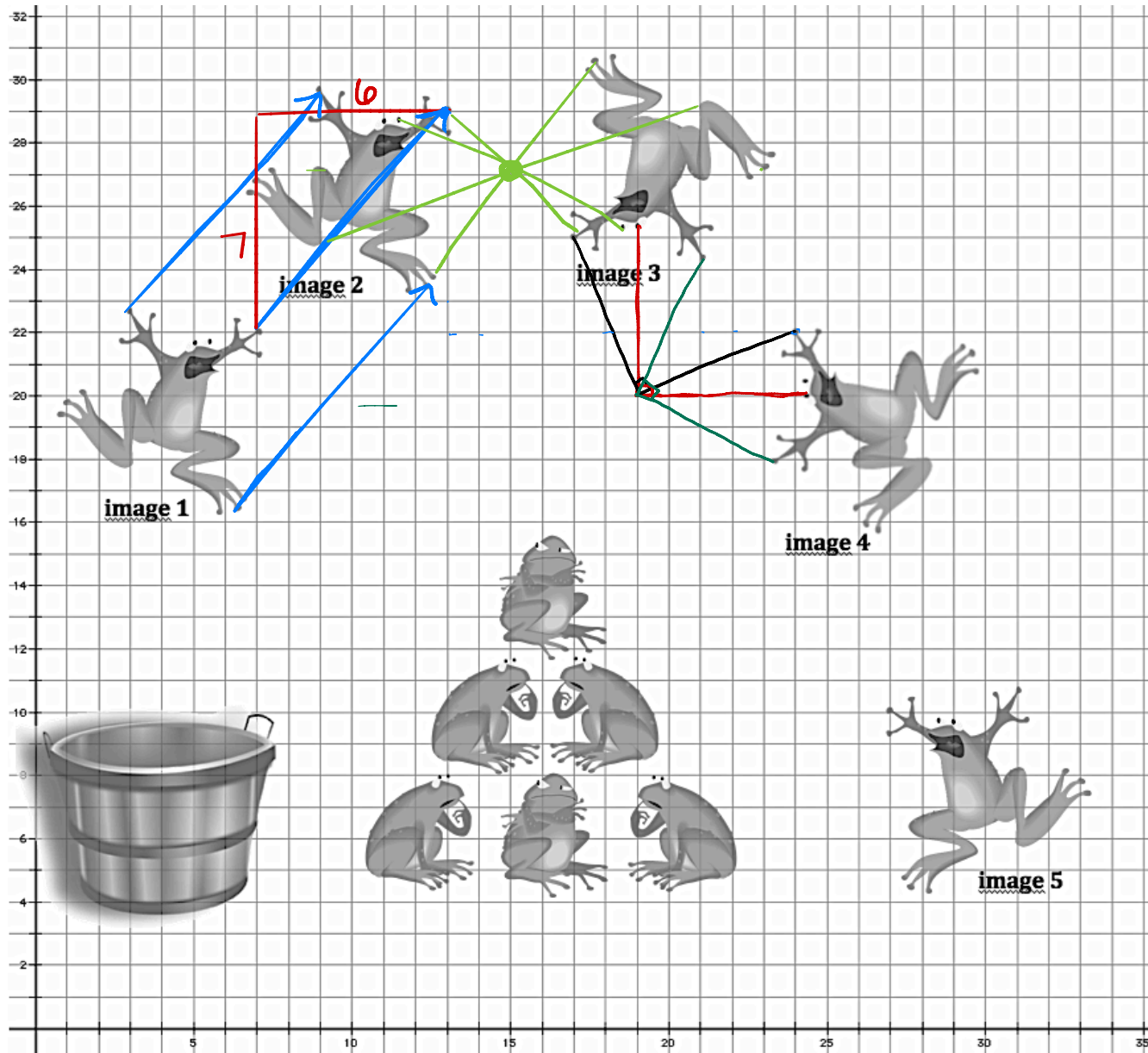
### A Solidify Understanding Task

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	Translate up 7, right 6 $(x, y) \rightarrow (x+6, y+7)$ } Vector $\langle 6, 7 \rangle$
image 2	image 3	Rotate $180^\circ$ about the point $(15, 27)$
image 3	image 4	Rotate $90^\circ$ Clockwise about the point $(19, 20)$
image 1	image 5	Answers may vary • Translate down 12 right 20, then reflect over $x=25$ } Composition of transformations
image 2	image 4	Answers may vary • Translate down 7 right 11 • Rotate $90^\circ$ CCW about the point $(24, 22)$



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