Math Circles - Donald in Mathmagic Land

This is our last math circles lesson of the semester!

We will watch a movie today. If you want to see it again at home ask a grown-up to search for it in YouTube. The full version is 27:36 minutes long. Here are some questions to answer as you watch it:

1. (min 1:16) Can you draw creature that writes numbers? What is it made of?

2. (math 1:49) What is up there on a
   tree branch? Redraw this bird.
   List its components.

3. What is the bird talking about?

4. What is Mathemagic Land?

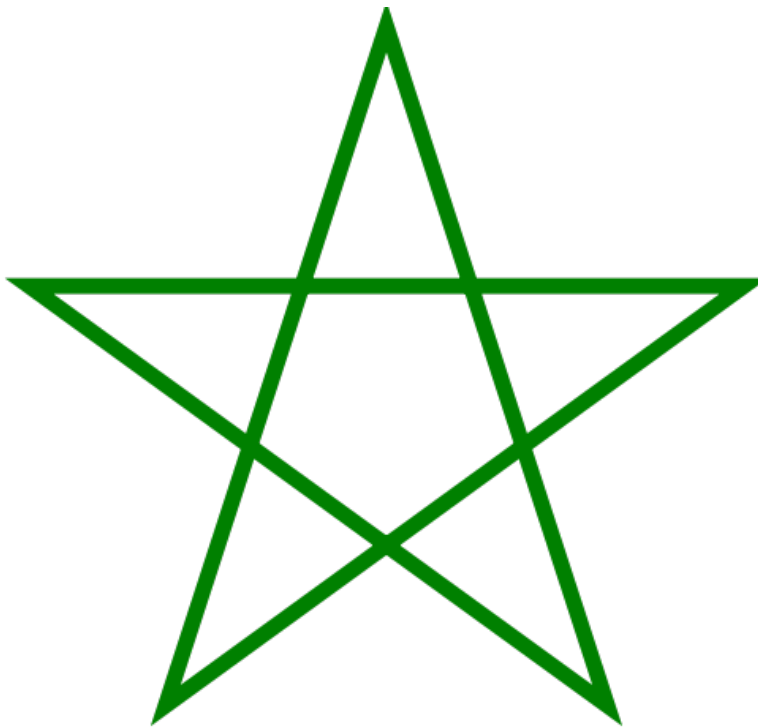5. (min 2:53) Who was the father of Mathematics and Music? Where did he live?

6. (min 3:08) "The octave has a ratio of 2 to 1". By looking at the cartoon explain what this means.

7. What was the secret emblem of the Pythagoreans? Draw it.

8. Is their emblem a regular polygon? How is it different from polygons seen in class?

9. What type of music are the "Pythagoreans" playing after Donald joins in?

10. Try to repeat the construction done in (min 7:21) using the pentagram below. It is hard, just be patient and label the vertices!

11. Does Donald fit in a Golden Rectangle? What shape does he fit in?

12. Use this page to ask your own questions as you watch the movie.