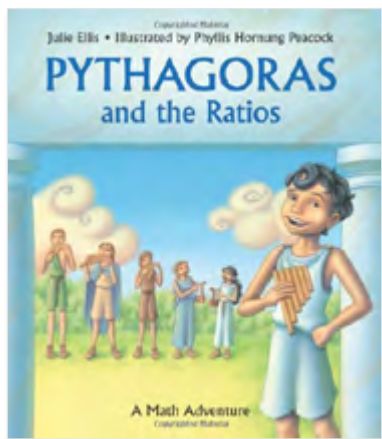


Grade 2: Domain 3

Pythagoras and the Ratios



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●●● QT: 740L

Read-Alouds with this rating may demonstrate sophisticated syntax and nuanced content.

●●● QL: 2

These Read-Alouds may include some complexity in structure and purpose. The language may include some unconventional phrasing, idioms, or other specialized phrasing.

●●● RT: 3

This unit's tasks and activities contain nuance and complexity, requiring students to draw on the knowledge they have built throughout the program.

Summary: Pythagoras's cousin Octavius wants to win the music contest, but his pipes are out of tune. Pythagoras compares the faulty pipes to his own perfect set. Together the cousins find a relationship between the longest and shortest of Pythagoras's pipes, which gives them an idea about how to fix Octavius's set. But when cousins Reyna and Amara ask Pythagoras to fix their lyres so that they can join in the contest, too, the solution is not quite so easy. Set in ancient Greece, this fun tale introduces the mathematical concept of ratio and its relationship to sound.

Essential Question

What were some important contributions of the ancient Greek civilization?

Tell students that *Pythagoras and the Ratios* is a fictional story set in ancient Greece. Turn to the last page first and read students the first paragraph of the "Historical Note" section. Before you begin reading the story itself, remind students that what they are about to read is not true; rather, it is just based on the life and contribution of Pythagoras.

Draw the following chart on the board and recount details of the text by completing the chart together.

What is the main problem?		
Pythagoras's cousins wanted to enter a music contest and needed help.		
Who needed help?	What was the problem?	How did Pythagoras help?
Octavius	His new pipes didn't sound very good.	He compared the length of his pipes to Octavius's pipes and cut them to the right length.
Amara and Reyna	When they played their lyres together, they sounded awful.	He tied different weights of rocks to the strings of the lyre.

Then ask students the following:

- How did the story end? (*The cousins all played together, and the crowd cheered.*)
- Why did the crowd cheer? (*They had never heard a group of people play in unison.*)

Vocabulary Routine

Tier 2 Vocabulary Words

relationship
unison

Tier 3 Vocabulary Words

length
weight

Performance Task

Read the second paragraph of the “Historical Note” section on the book’s last page. Ask students to think about what information in this paragraph differs from the story. Have them turn and talk with a partner, then share together as a group. Students should identify that the real Pythagoras probably never tried to tie weights to the strings of the lyre. Next, ask students what important discovery Pythagoras made. Students should understand that he discovered the relationship between math and music.

Writing Prompt

Have students write a sentence or sentences based on the following prompts. Encourage students to write in complete sentences.

- Pythagoras is an important figure because . . .
- The thing I like most about Pythagoras is . . .