

POD

- 1) Find the area of a square with sides of... (use proper units)
 - a) 3 inches
 - b) 4 inches
 - c) 5 inches

- 2) Draw a right triangle with sides 3, 4, and 5.

- 3) Write the definitions of the words: hypotenuse, leg, right angle.

- 4) When you do that, download the notes from the blog or pick up a copy.

Agenda for Today

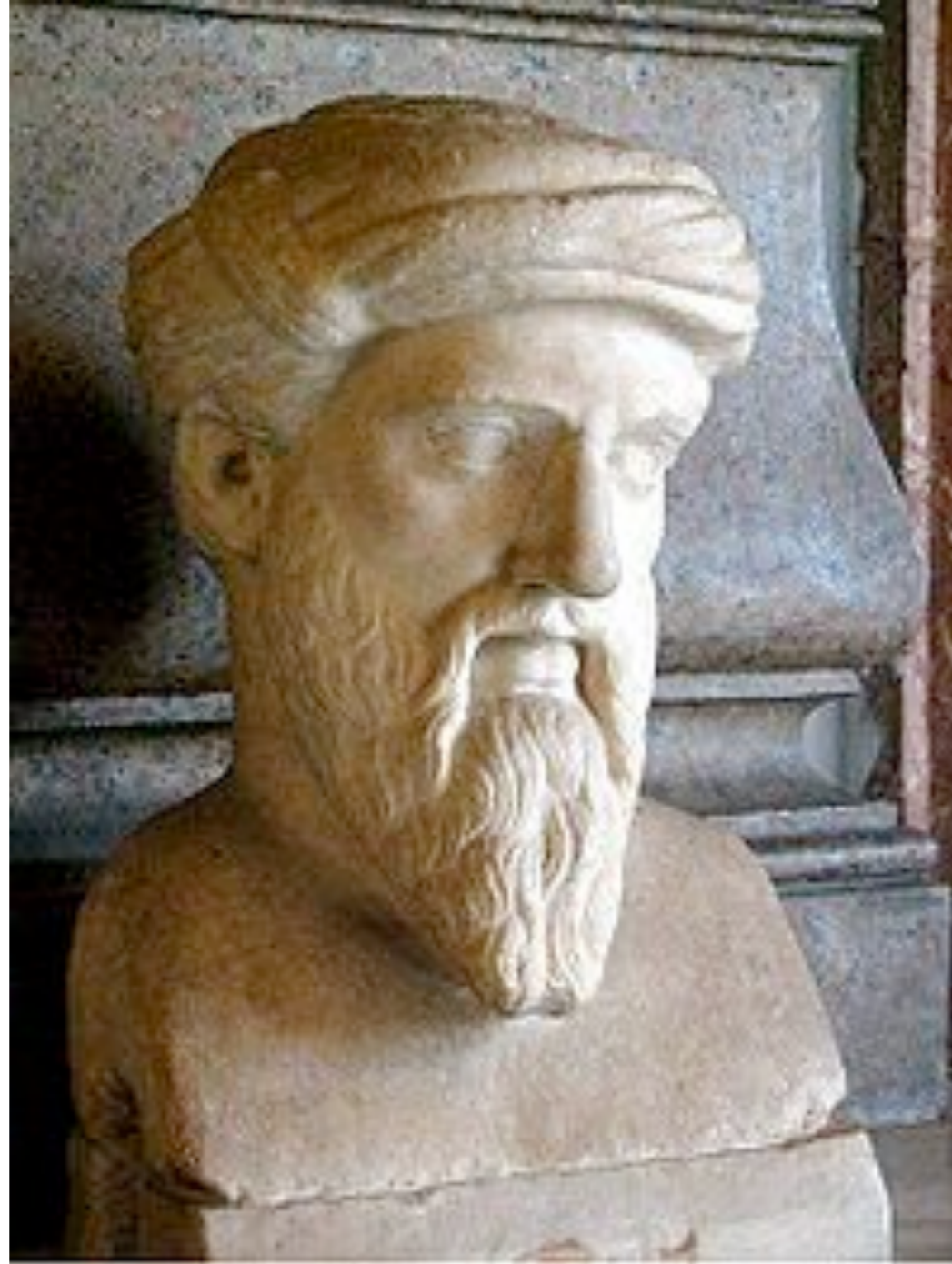
- Geometric Mean
- A little History Lesson
- A Cult-Leader's Theorem
- 20 Minutes of Semi Self-Study
- Applications
- Homework/Exit Ticket
- Games?

Geometric Mean

The geometric mean between two positive numbers a and b is the positive number x where $a/x = x/b$.

Key thing to Consider:
It is like scale factor
Use proportions.

Cult History

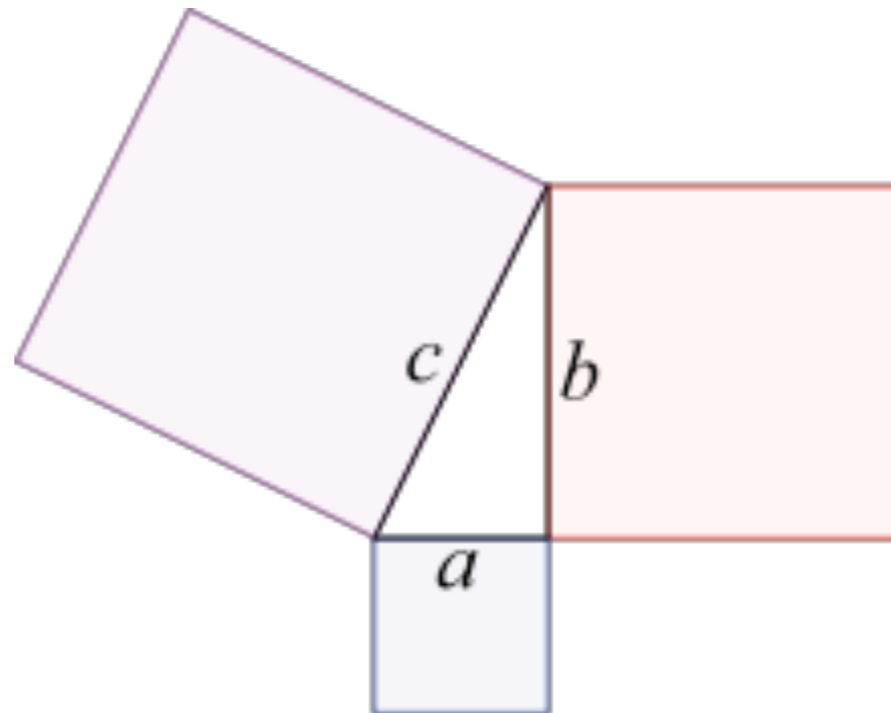


Cult HistoryHistory



The Cult's Theorem

$$a^2 + b^2 = c^2$$



Your Groups

Groups:

8-1: Chris, Madison, Alison, Savannah

8-2: Paige, Brook, Courtney, Wesley,

8-3: Kyle, Emilee, Nicole, Gabby

8-4 & Pythagorean Triples: Nate,
Oliver, Jericho, Isla

8-5: Charlotte, Jacelyn, Justin, Hayley

Your Task

You have 10 minutes to:

- 1) Restate the Theorem Simply
- 2) Do one example.
- 3) Draw a picture to help you explain
- 4) Do the beginnings of a proof.

Make sure you give it a good name!

Be ready to present and to upload to Google Docs.

Application Problems

Do these four in any order. You have 20 minutes. Work hard.

1) Find the length of a cross brace on the back wall.

2) Find Pythagorean triples with the smallest side of 3, of 5, and a third of 7.

3) Draw a 45, 45, 90 triangle. You will be given two sides, find the 3rd side, then find the ratio between a leg and the hypotenuse.

- A triangle with legs length 1
- A triangle with legs length 2
- A triangle with legs length 3

4) What is the slope of the hypotenuse of a 3, 4, 5, triangle with the shortest side parallel to the x axis?

Exit Ticket & Homework

- Exit tickets must be done before you leave.
- Homework pg 401-402 15-35.

Notes On The Homework:

- 15-17 : Geometric Mean
- 18-20 : Apply Thm 8-1 to 8-
- 21-29 : Apply Pythagorean Theorem
- 30-32 : Apply Pythagorean Theorem (Converse)
- 33-35 : You need to look back to pg 400.

