

Math3105
Homework 2
Due next week in class

Homework Assigned:

- (a) Draw a Golden Triangle (an isosceles triangle whose angles are 36 degrees, 72 degrees and 72 degrees), and label its vertices ABC (so that A and C are the base vertices). Connect A to a point (call it D) on BC such that AD is the angle bisector for angle A. Label the length of BD as **a** and the length of DC as **b**. Prove that $\frac{a+b}{a} = \frac{a}{b}$.

(b) Prove that the part (a) conclusion implies that $a = b\phi$.

(c) Draw a regular pentagon, and label it ABCDE. Draw one of its diagonals from A to C. If you know the length of the sides of the pentagon is 1, then what is the length of the diagonal you've drawn? (Include your reasoning.)
- Find two other interesting geometric applications about the golden ratio and type up a page about your discoveries (double spaced, size 12 font).

MESA teaching at Bryant Junior High School

40 South 800 East, Room 206
(Just down the hill from the U off of South Temple.)
Our contact is Laurel Steele
578-8118 x206

You and a teammate will prepare a 50-minute geometry lesson and present it on a Wednesday, starting at 3:00 p.m.

You have signed up for Wednesday, _____.

Your teammate is _____ and can be reached at

_____.