

Create a work that incorporates the Golden Ratio and/or the Fibonacci numbers as thoroughly as possible. This could involve Golden Rectangles, lines cut in the mean and extreme ratio, Golden Triangles (as defined in PS 5), pentagons and pentagrams, etc. Of course, the way you involve these ideas could be explicit, or you could design a specific part of your drawing so that it just exactly fits into a Golden Rectangle or Golden Triangle, or you could make it so that various parts of the drawing are spaced in a way that forms an implicit Golden Rectangle or Golden Triangle. (Should your work be selected for the end-of-semester art show, thumb tacks or staples will be used to display it. If you don't want that, please mount it on some sort of matting through which we *can* put thumb tacks.)

Once you've completed your work, go back and carefully measure everywhere that you attempted to incorporate the Golden Ratio. How close were you, in the end? What sort of acceptance range does this indicate to you that you should use when looking at other works of art?

Write an accompanying paragraph that describes how you incorporated math into your work, and how it all turned out in the end; think in terms of a description that would accompany your art in an art show – you'd want them to know how you incorporated math into the work, and what mathematical principles are illustrated. Also, title your work.

Possible points: A work of art that correctly and extensively incorporates the Golden Ratio and Fibonacci numbers in a variety of ways, and that comes accompanied with a clear description of each of those uses *and* which then includes an analysis of how well the finished project lived up to your attempts (using the standards for judgment we develop) and a discussion of what sort of acceptance range you now think is reasonable, based on your own experience could earn up to 55 points. A work of art accompanied only by the description of the uses but which omits the subsequent analysis of the finished result and the conclusions about acceptance ranges could earn up to 35 points if the uses are frequent and varied. Of course, fewer instances of the Golden Ratio or Fibonacci numbers (or a less creative and varied use of them) will earn fewer points.

Note: A work of art submitted without any corresponding mathematical analysis will be returned ungraded.