

GEOMETRY THROUGH ART

Making designs in a circle and coloring them is great fun. Exploring the possibilities is what making grids is all about. Each point on the circle invites you to find connecting chords.

Can you make chords to identify an octagon?

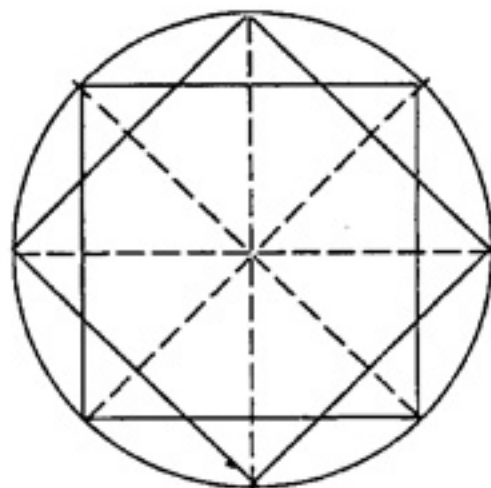
Use colored markers to highlight and identify:

2 sets of 4 rectangles

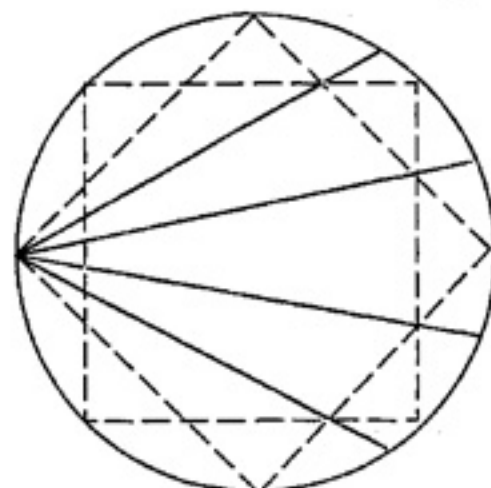
2 sets of 4 squares

2 sets of right triangles in 3 sizes!

How many triangles can you count in addition to the sets you've identified?



Each point on this circle has at least 4 new chords that are not sides of the squares. Drawing 8 sets of 4 chords, try to construct a grid that looks like the one at the bottom of this page.



The grid is full of interesting illusions!

How many circles do you think you see?

Circles that are formed in this way are called geodisic. What geometric shapes can you identify whose sides suggest the circumference of a circle? How many of the shapes make each geodisic circle?

It is in making grids like this that we get a sense of the complexity and mystery of the circle and what it tells us about our powers to explore reality as we know it. The circle has long been considered the most beautiful and wonderful of geometric shapes. Peoples in different parts of the world use the circle as their sacred symbol. This making of grids gives the interested student a way to learn about some of its mysteries.

