



# Folding Conic Sections

## Materials

Four pieces of wax paper per student.  
(approximately 11 x 14 in.)

Four pieces of colored construction paper per student.

Compass

Ruler

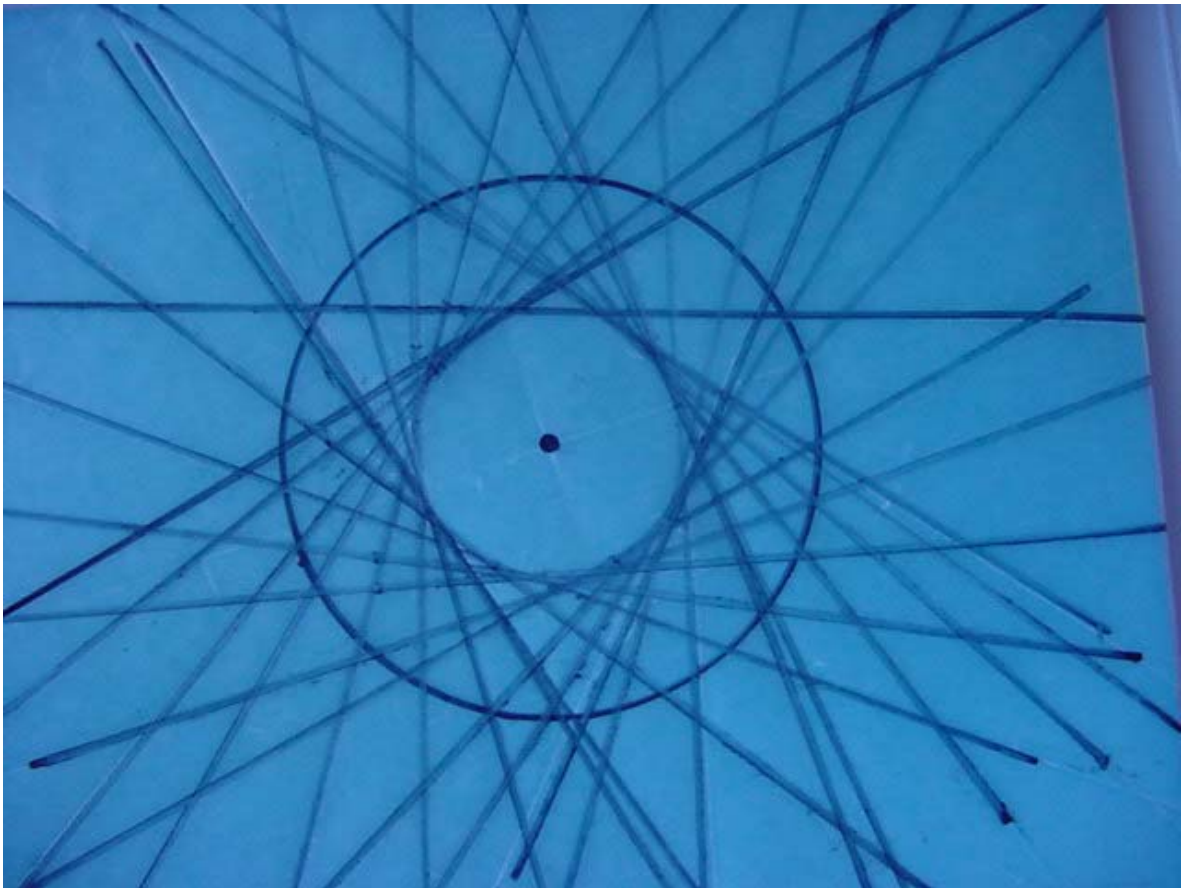
Permanent Marker

## Directions

For each conic section you will need one piece of wax paper, one piece of construction paper, a permanent marker, compass and ruler.

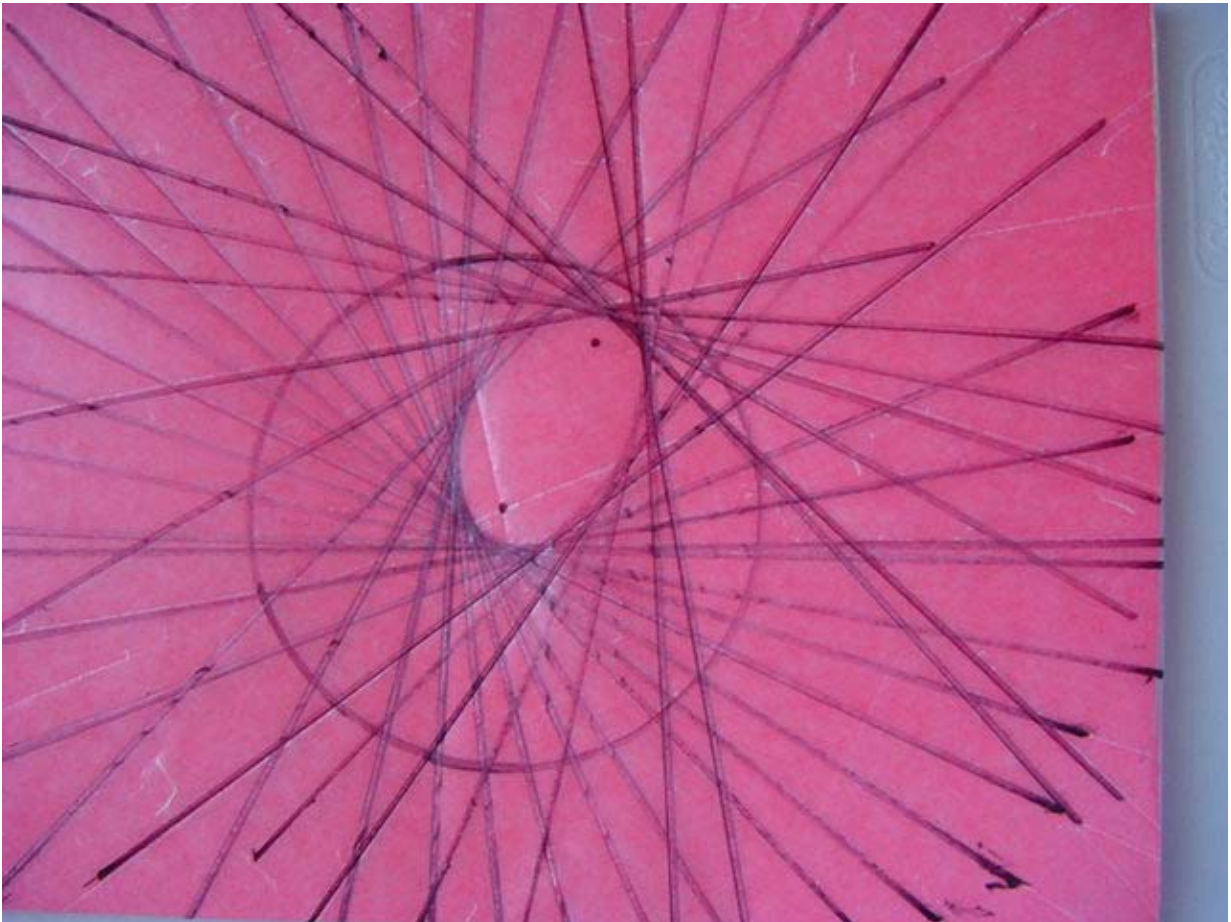
## Circle

1. With your compass draw a circle in the center of your wax paper. Mark the center of your circle. Trace over the circle and the center with a permanent marker.
2. Fold the wax paper several times so that the center point lies on the circle. Try to fold so that you make your way all the way around the circle.
3. Trace over all of the fold lines with your permanent marker.
4. You should see a smaller circle in the center of your larger circle.
5. Attach the wax paper to a piece of construction paper by folding the wax paper over the construction paper and taping it on the back.
6. See below for an example.



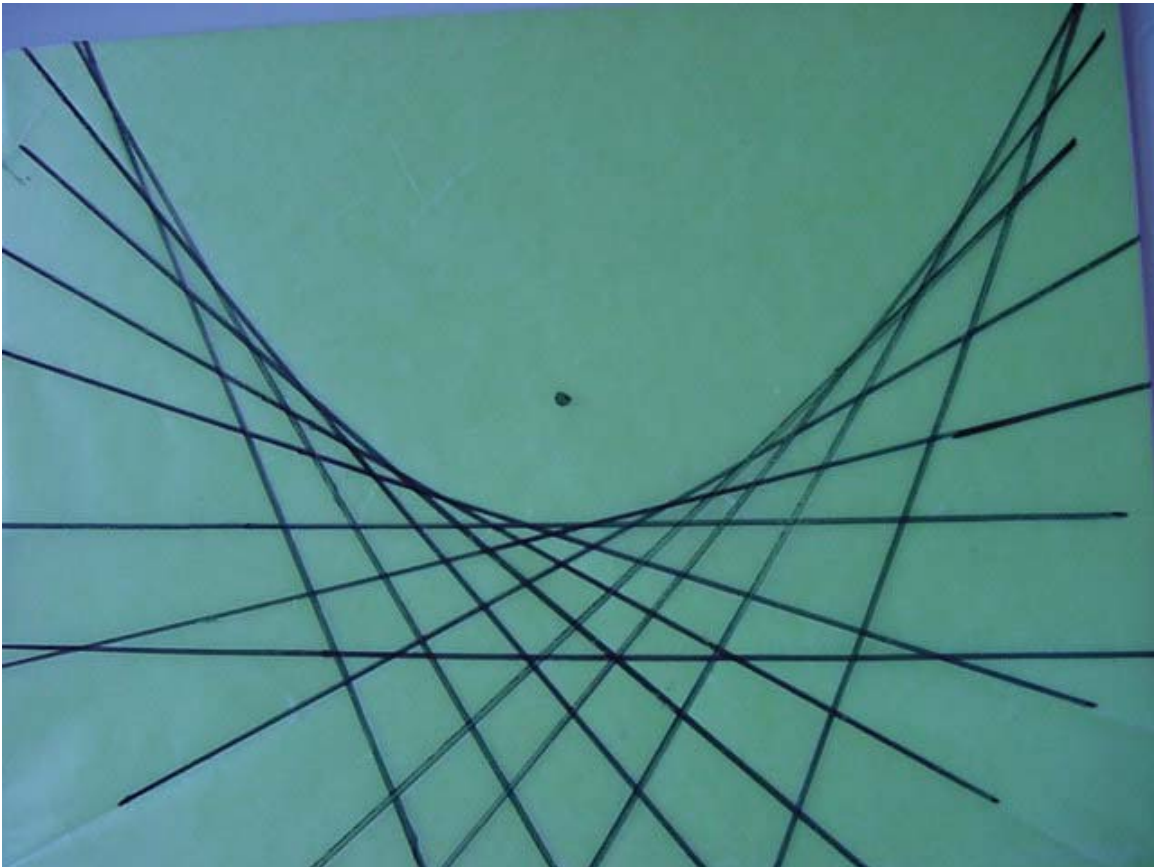
## Ellipse

1. With your compass draw a circle in the center of your wax paper. Mark the center of your circle. Trace over the circle and the center with a permanent marker.
2. Draw another point anywhere inside of the circle.
3. Fold the wax paper several times so that the point, that is not the center point, lies on the circle. Try to fold so that you make your way all the way around the circle.
4. Trace over all of the fold lines with your permanent marker.
5. You should see a small ellipse inside of your circle.
6. Attach the wax paper to a piece of construction paper by folding the wax paper over the construction paper and taping it on the back.
7. See below for an example.



## Parabola

1. With your ruler draw a horizontal line across the bottom half of your wax paper. Draw a point above the line (approximately in the middle). Trace over the line and point with a permanent marker.
2. Fold the wax paper several times so that the point lies on the line. Try to fold so that you make your way all the way across the line.
3. Trace over all of the fold lines with your permanent marker.
4. You should see a parabola.
5. Attach the wax paper to a piece of construction paper by folding the wax paper over the construction paper and taping it on the back.
6. See below for an example.



## Hyperbola

1. With your compass draw a circle on your wax paper. Draw a point anywhere outside of the circle. Trace over the circle and the point with a permanent marker.
2. Fold the wax paper several times so that the point outside of the circle lies on the circle. Try to fold so that you make your way all the way around the circle.
3. Trace over all of the fold lines with your permanent marker.
4. You should see a hyperbola.
5. Attach the wax paper to a piece of construction paper by folding the wax paper over the construction paper and taping it on the back.
6. See below for an example.

