

Constructing Angle Bisectors

Method 1: Paper Folding

1. Draw angle XYZ on a piece of paper.
2. Fold the paper at Y so that XY lies along ZY .
3. Open the paper and use a ruler to draw a line segment along the fold.
Label the line segment YW .
4. Use a protractor to measure the two angles formed by the bisector. They should be equal.



Method 2: Mira

1. Draw angle XYZ .
2. Place the Mira so that the reflection of XY lies along ZY .
3. Draw a line segment along the edge of the Mira.
4. Verify the angle bisector.

Method 3: Compass

1. Draw angle XYZ .
2. Place the compass point on Y .
Draw an arc that intersects both arms of the angle.
Label the intersection points A and B .
3. Do not change the distance between the compass point and pencil tip.
Place the compass point on A . Draw an arc.
Then place the compass point on B .
Draw a second arc that intersects the first.
4. Label the intersection point C . Use a ruler to draw line segment YC .
5. Verify that YC is the angle bisector of angle XYZ .

