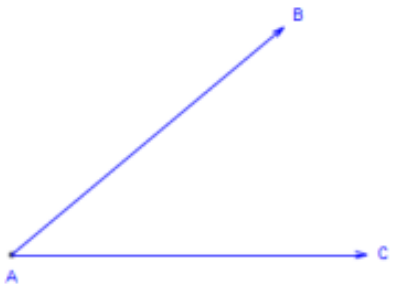
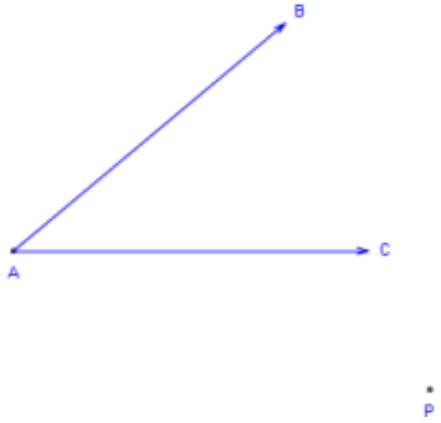
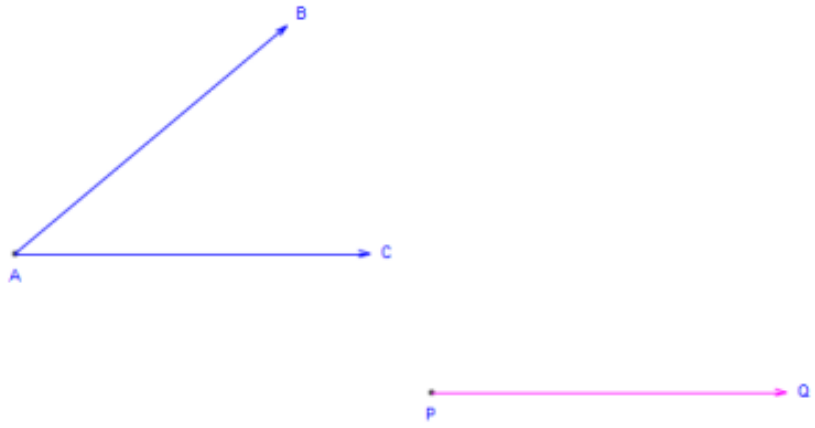
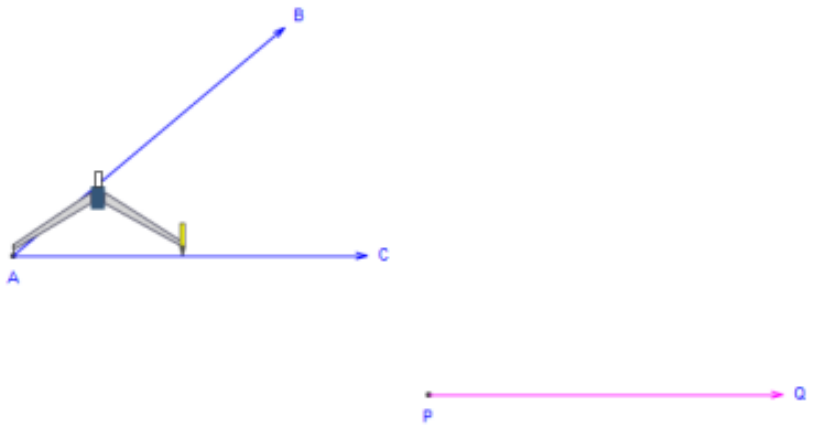
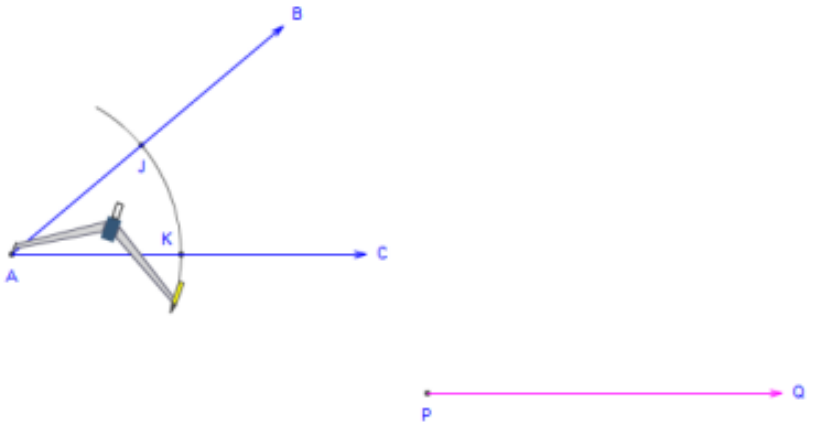
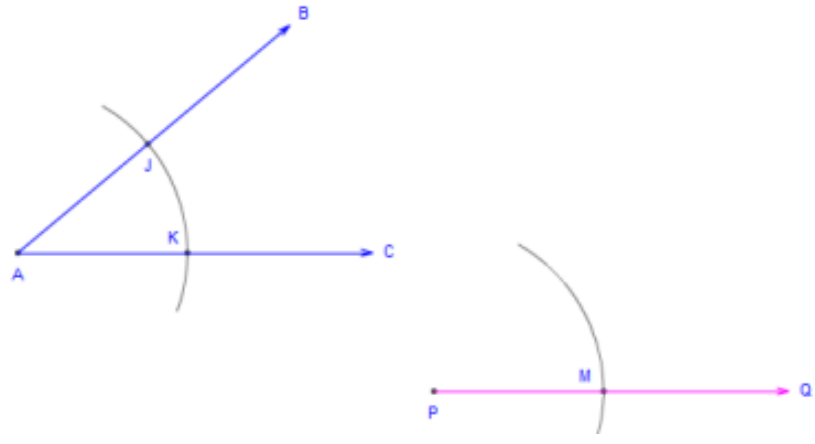
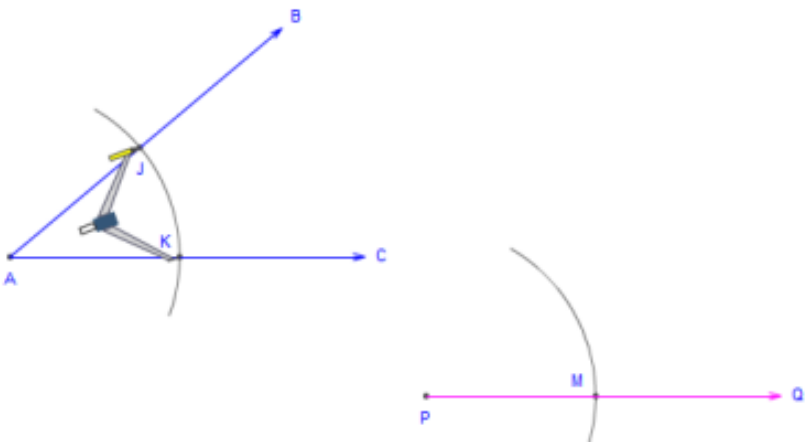
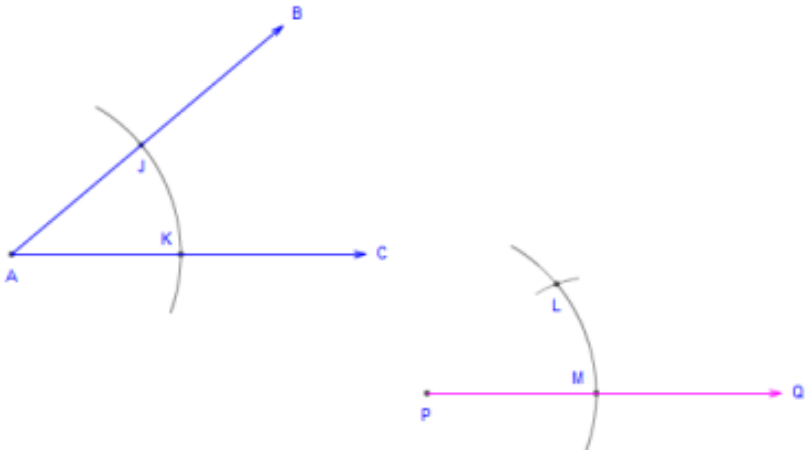
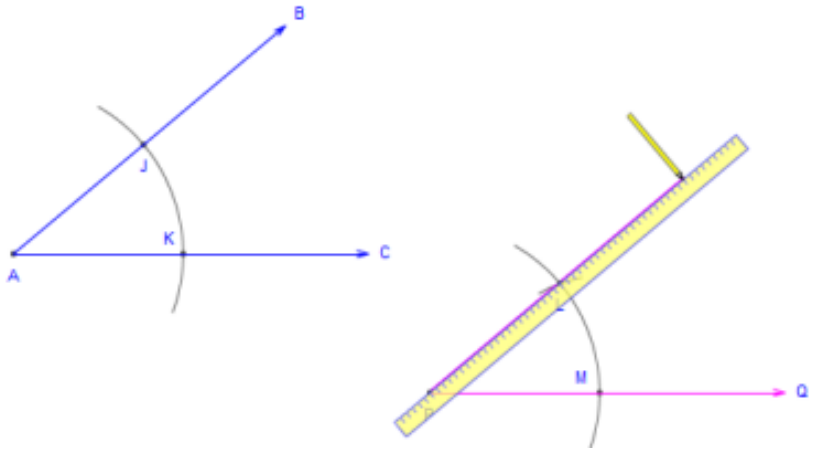
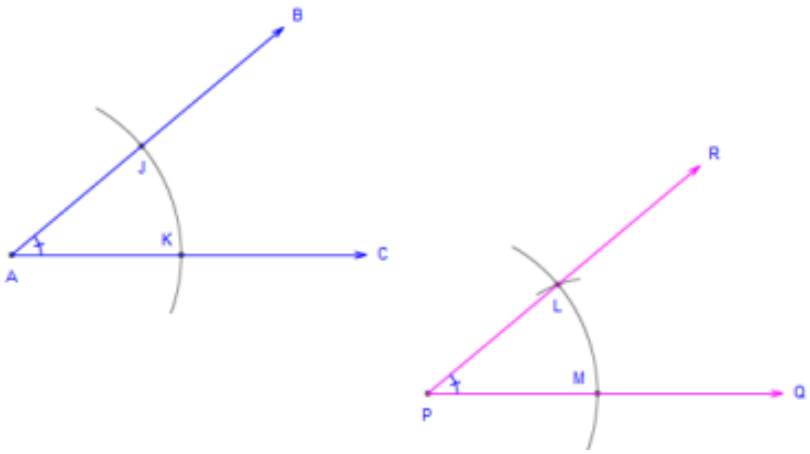
Copying an angle

After doing this	Your work should look like this
Start with a angle BAC that we will copy.	
1. Make a point P that will be the vertex of the new angle.	
2. From P, draw a ray PQ. This will become one side of the new angle. • This ray can go off in any direction. • It does not have to be parallel to anything else. • It does not have to be the same length as AC or AB.	

After doing this	Your work should look like this
3. Place the compasses on point A, set to any convenient width.	
4. Draw an arc across both sides of the angle, creating the points J and K as shown.	
5. Without changing the compasses' width, place the compasses' point on P and draw a similar arc there, creating point M as shown.	

After doing this	Your work should look like this
6. Set the compasses on K and adjust its width to point J.	
7. Without changing the compasses' width, move the compasses to M and draw an arc across the first one, creating point L where they cross.	
8. Draw a ray PR from P through L and onwards a little further. The exact length is not important.	

After doing this	Your work should look like this
Done. The angle ∠RPQ is congruent (equal in measure) to angle ∠BAC.	

Click Here for More Infor

Ad by **Sponsor**

Other constructions pages on this site

List of printable constructions worksheets

Lines

Introduction to constructions

Copy a line segment

Sum of n line segments

Difference of two line segments

Perpendicular bisector of a line segment

Perpendicular at a point on a line

Perpendicular from a line through a point

Perpendicular from endpoint of a ray

Divide a segment into n equal parts

Parallel line through a point (angle copy)

Parallel line through a point (rhombus)

Parallel line through a point (translation)

Angles

Bisecting an angle

Copy an angle

Construct a 30° angle

Construct a 45° angle

Construct a 60° angle

Construct a 90° angle (right angle)

Sum of n angles

Difference of two angles

Supplementary angle

Complementary angle

Constructing 75° 105° 120° 135° 150° angles and more

Triangles

Copy a triangle

Isosceles triangle, given base and side

Isosceles triangle, given base and altitude

Isosceles triangle, given leg and apex angle

Equilateral triangle

30-60-90 triangle, given the hypotenuse

Triangle, given 3 sides (sss)

Triangle, given one side and adjacent angles (asa)

Triangle, given two angles and non-included side (aas)

Triangle, given two sides and included angle (sas)

Triangle medians

Triangle midsegment

Triangle altitude

Triangle altitude (outside case)

Right triangles

Right Triangle, given one leg and hypotenuse (HL)

Right Triangle, given both legs (LL)

Right Triangle, given hypotenuse and one angle (HA)

Right Triangle, given one leg and one angle (LA)

Triangle Centers

Triangle incenter

Triangle circumcenter

Triangle orthocenter

Triangle centroid

Circles, Arcs and Ellipses

Finding the center of a circle

Circle given 3 points

Tangent at a point on the circle

Tangents through an external point

Tangents to two circles (external)

Tangents to two circles (internal)

Incircle of a triangle

Focus points of a given ellipse

Circumcircle of a triangle

Polygons

Square given one side

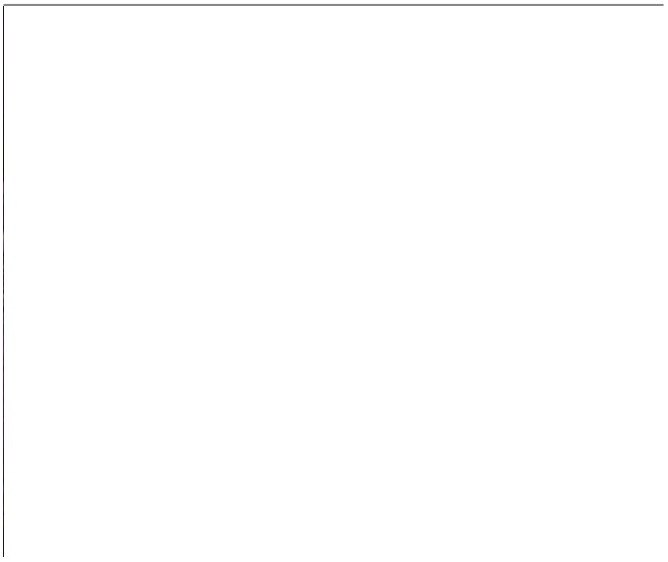
Square inscribed in a circle

Hexagon given one side

Hexagon inscribed in a given circle

Pentagon inscribed in a given circle

Non-Euclidean constructions

Construct an ellipse with string and pins

Find the center of a circle with any right-angled object