

Angle bisectors

Mathematics

Mr Maseko



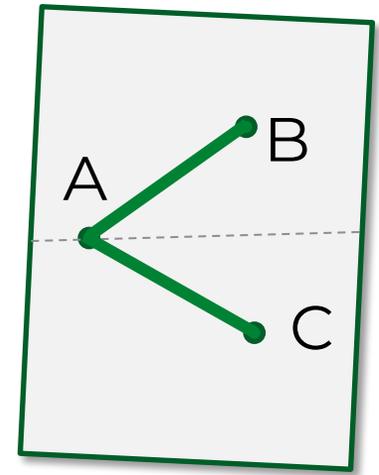
Try this

Take a piece of paper. Mark 2 adjacent line segments AB and AC.

Measure the angle BAC

Fold the paper so that AB and AC overlap.

What do you notice?

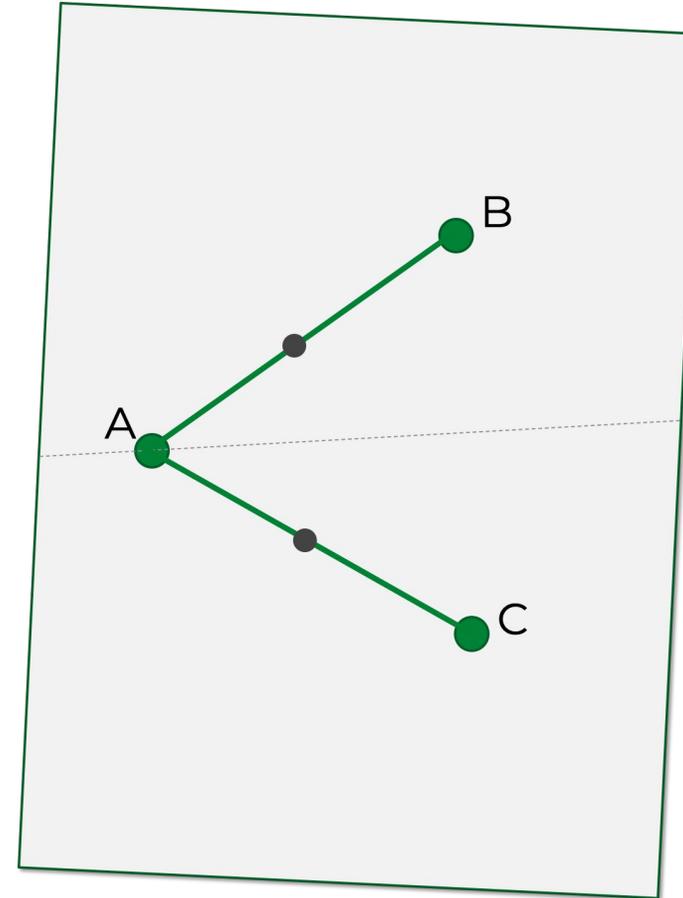


Try this

Mark 2 points on AB and AC the same distance from A.

Measure the distance of positions on the fold from these new points.

What do you notice?

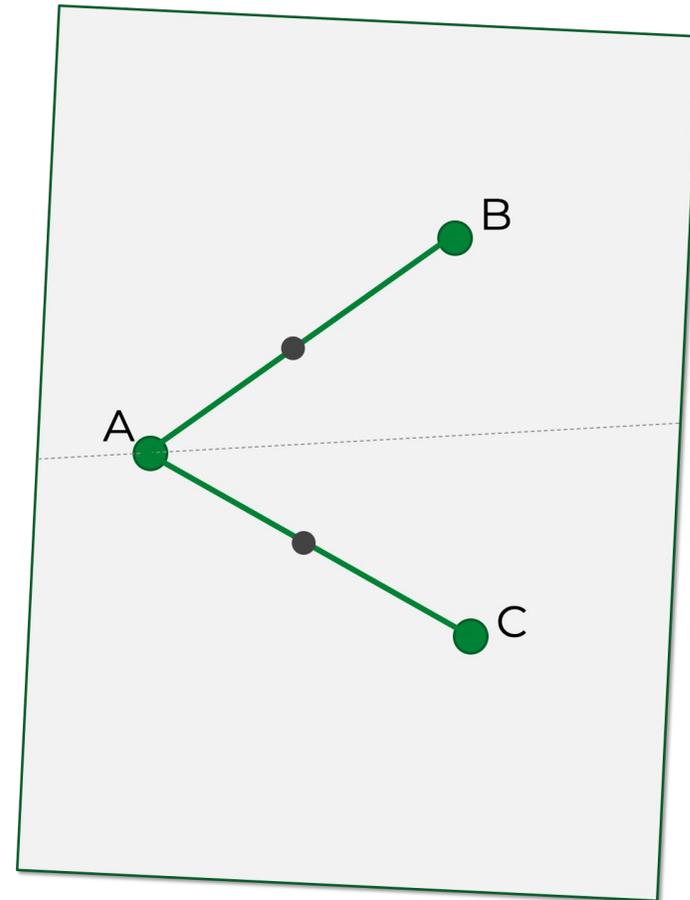


Connect

An **angle bisector** is a **locus** of points that are **equidistant between two line segments**.

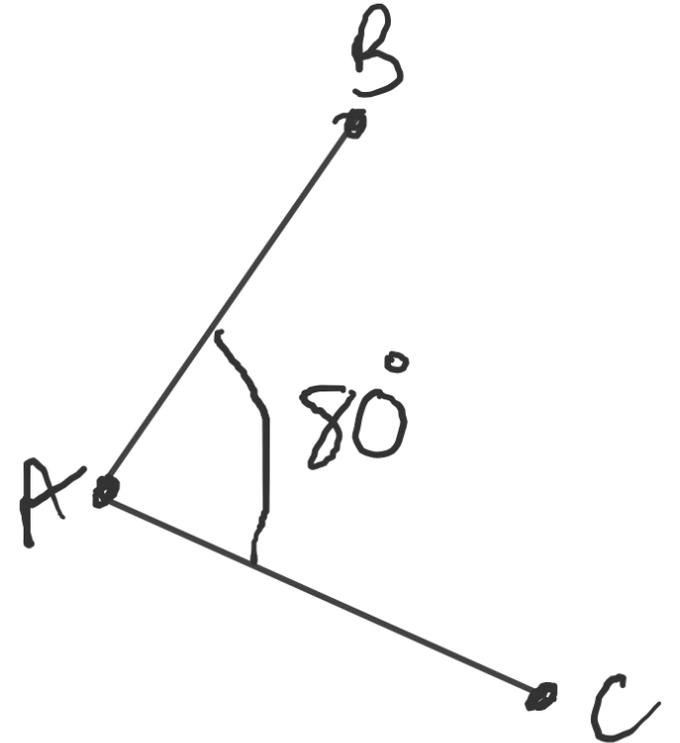
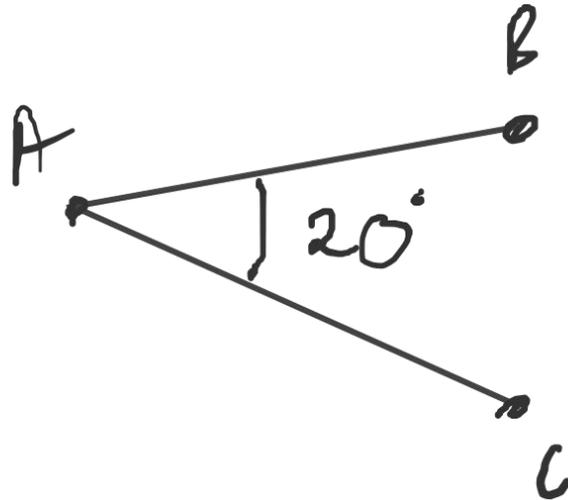
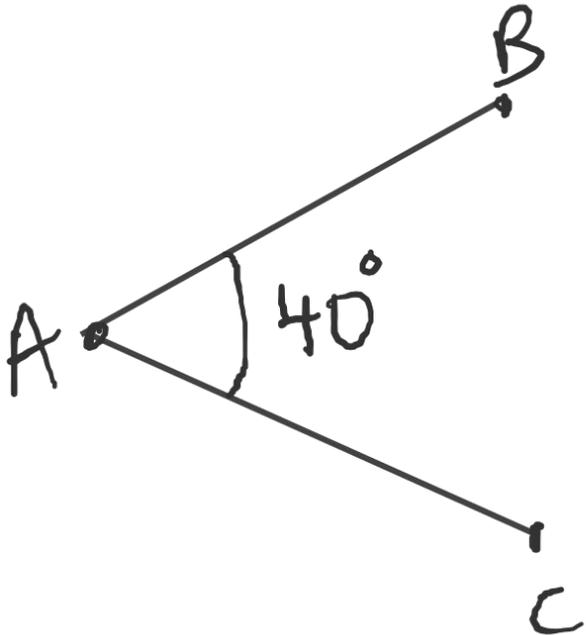
To bisect Angle BAC:

1. Create two points on the line segments AB and AC that are equidistant from A.
2. Join the midpoint of these points to A.



Independent task

Draw the following angles accurately and bisect them.



Explore

Draw a large random triangle and label the vertices A, B, C.

Draw the angle bisectors of $\angle ABC$, $\angle ACB$, $\angle BAC$.

What do you notice?

Make conjectures and test these on different triangles...

