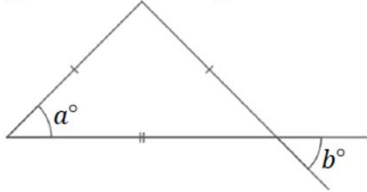


# Year 8 Mathematics Learning Journey: Unit 1 - Geometric Reasoning

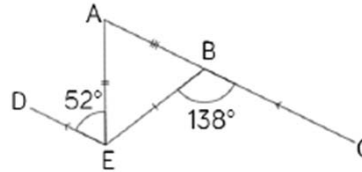
## Step 11 (H): Simple Proofs

Prove that angle  $a$  is equal in size to angle  $b$  in the diagram below.



## Steps 9 and 10 (H): Angles in parallel lines

Find the size of angle BAE.



## Step 8 (H): Angle sum of polygons

A regular polygon has an interior angle of  $172^\circ$ . How many edges does the polygon have?

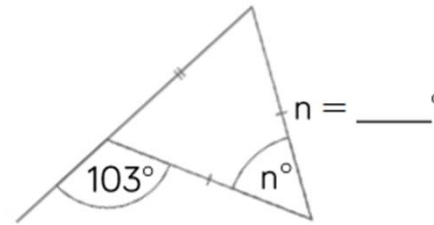
## Step 4: Angles in a triangle

Can a triangle have two right-angles?

## Step 5: Angles in a quadrilateral

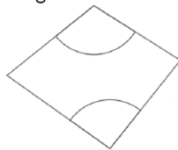
If a quadrilateral has four right-angles, is it a square?

## Steps 6 and 7: Angle Problems



## Step 3: Vertically opposite angles

Does this diagram represent vertically opposite angles?

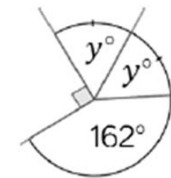


## Step 2: Sum of angles on a straight line

John measures 3 angles on a straight line. They are  $81^\circ$ ,  $47^\circ$  and  $51^\circ$ . Has John measured the angles correctly?

## Step 1: Sum of angles at a point

Form and solve an equation to find the value of  $y$ .



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