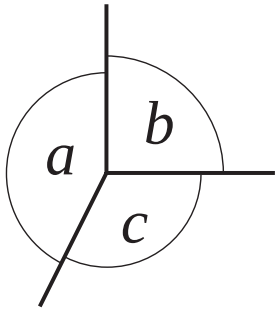
UNIT 15 *Polygons* Overhead Slides

Overhead Slides

15.1 Angle Facts
15.2 Angles
15.3 Interior and Exterior Angles
15.4 Lines of Symmetry
15.5 Rotational Symmetry
15.6 Special Quadrilaterals
15.7 Naming Quadrilaterals

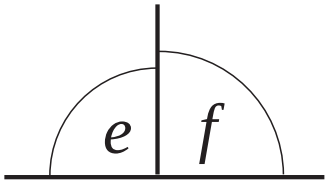
OS 15.1 *Angle Facts*

The angles at a point add up to 360 °,



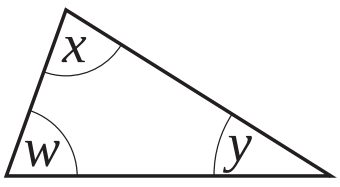
$a + b + c = 360\ °$

The angles on a straight line add up to 180 °,



$e + f = 180\ °$

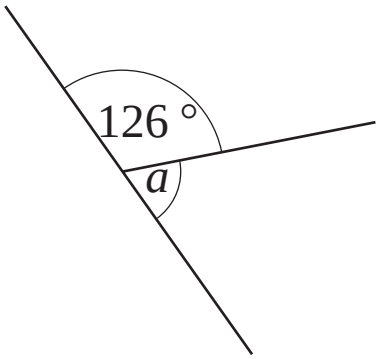
The angles in a triangle add up to 180 °,



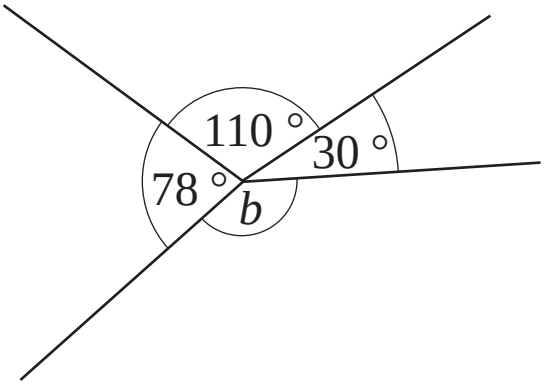
$w + x + y = 180\ °$

OS 15.2 *Angles*

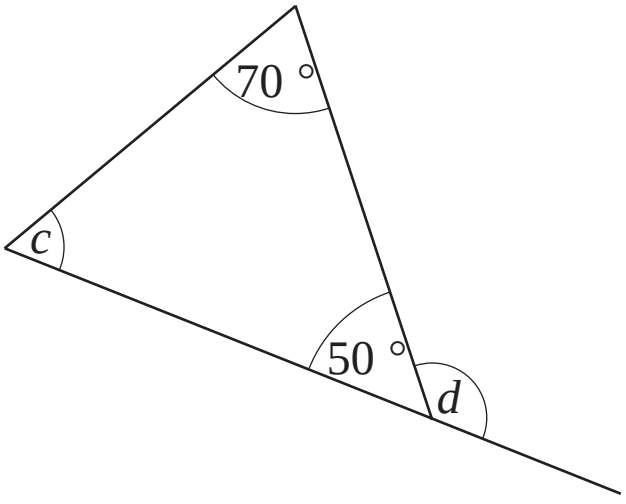
Determine the size of each of the angles marked with a letter:



angle a = ☐°



angle b = ☐°

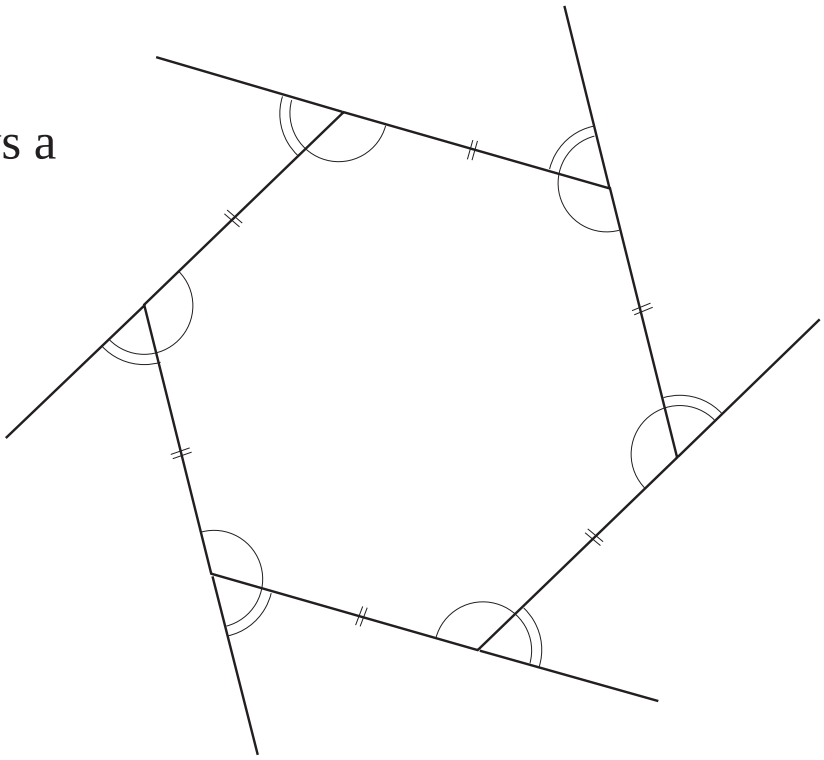


angle c = ☐°

angle d = ☐°

OS 15.3 *Interior and Exterior Angles*

The diagram shows a regular hexagon:



The angles marked ⟨ are the *interior* angles.

The angles marked ⟩ are the *exterior* angles.

Interior angle + exterior angle = ☐°

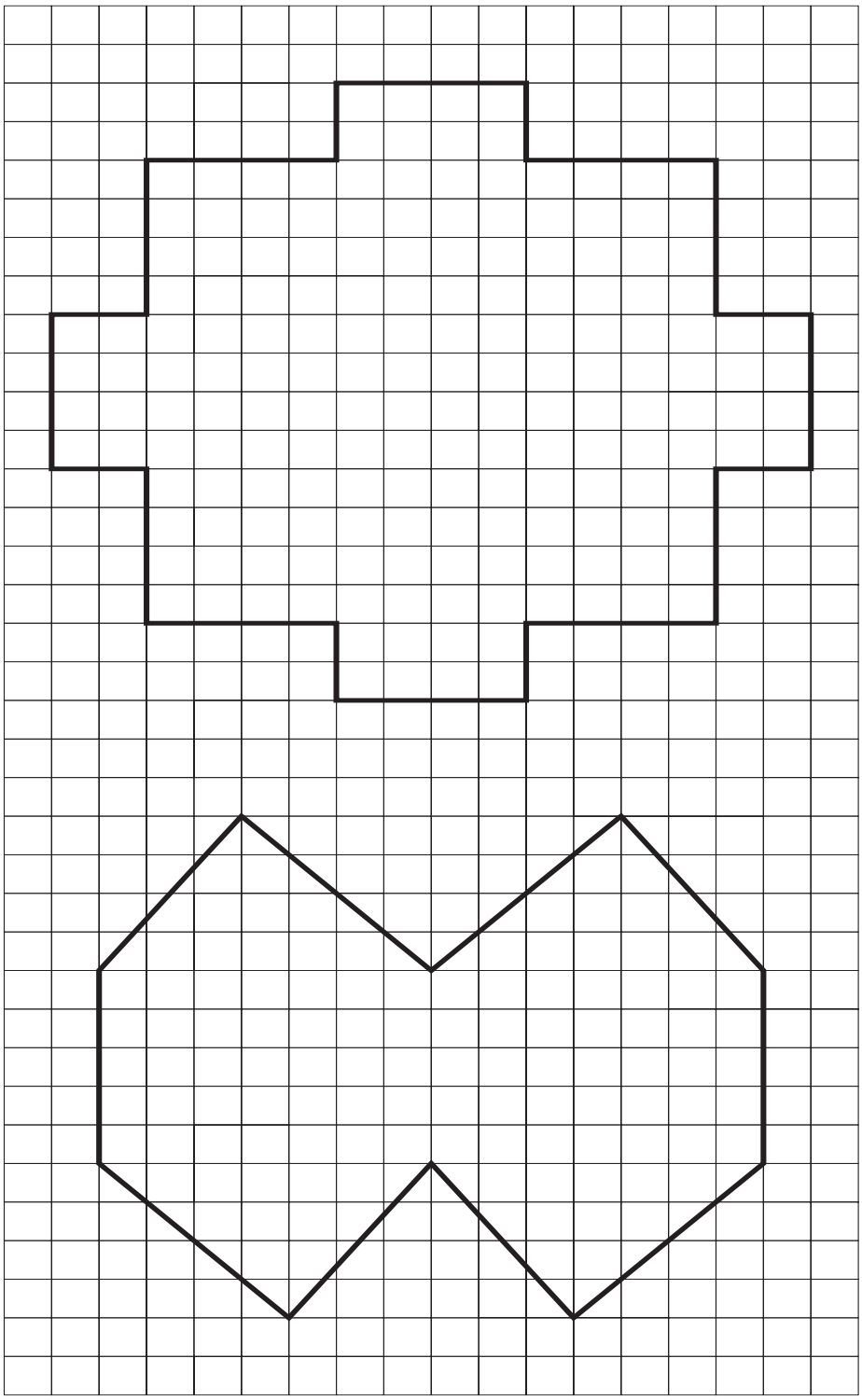
Total of all exterior angles = ☐°

What are the sizes of the interior and exterior angles of a regular hexagon?

Interior angle = ☐° Exterior angle = ☐°

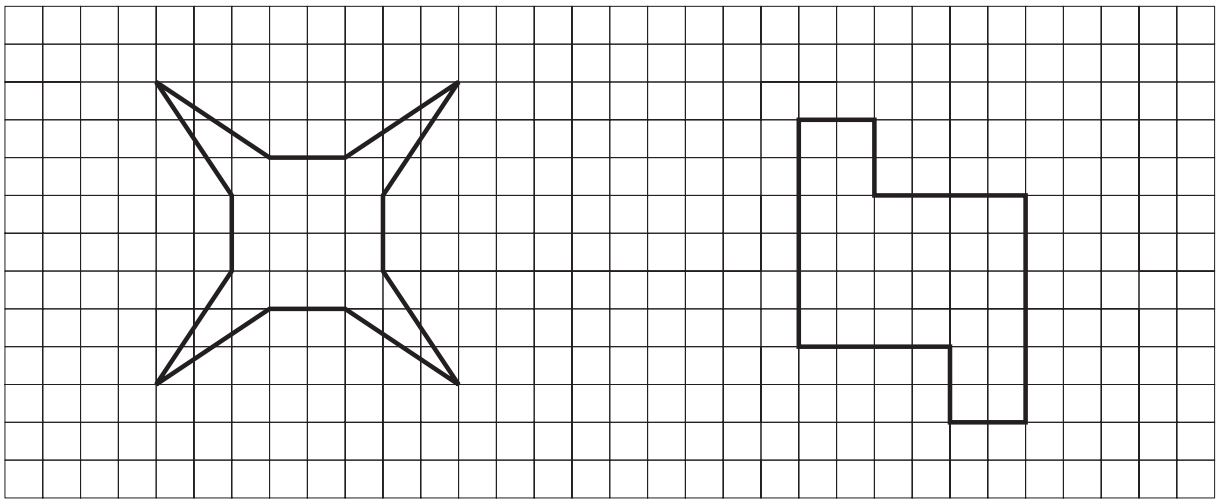
OS 15.4 *Lines of Symmetry*

Draw in the lines of symmetry for each of the following shapes:



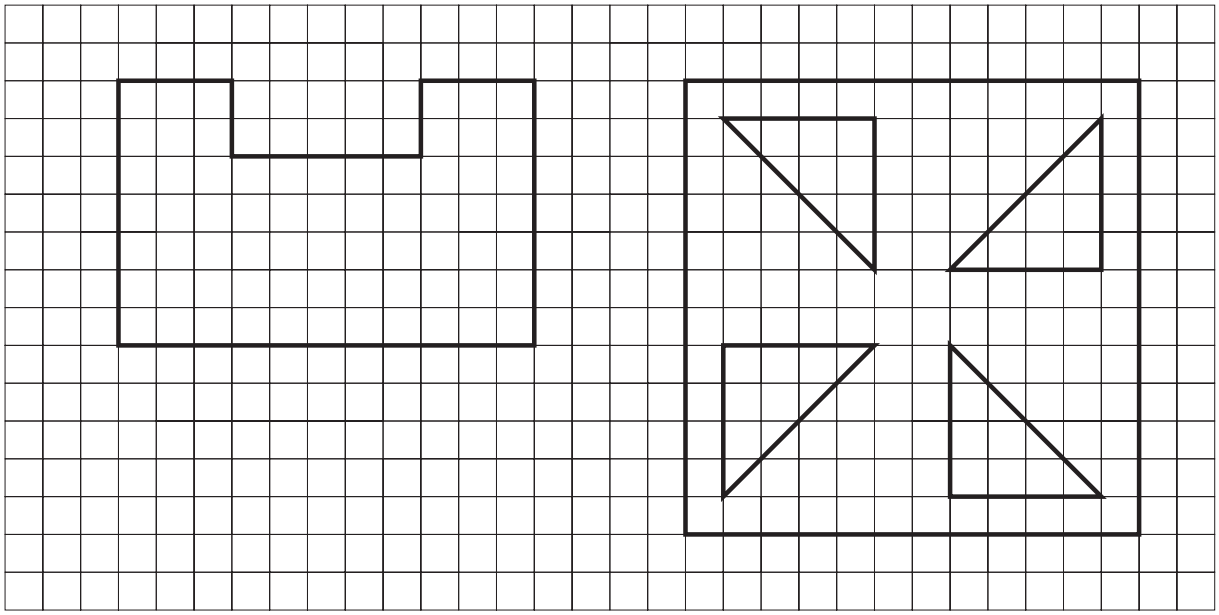
OS 15.5 *Rotational Symmetry*

What is the order of rotational symmetry of each of the shapes shown:



Order of rotational symmetry = ☐

Order of rotational symmetry = ☐

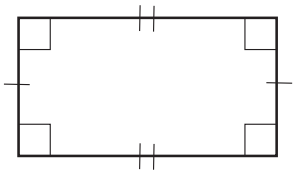
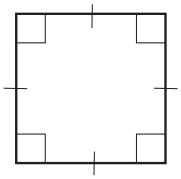
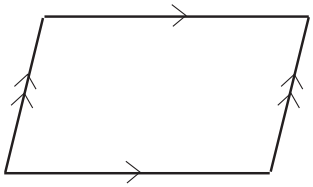
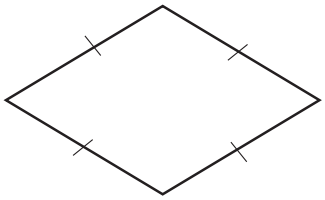
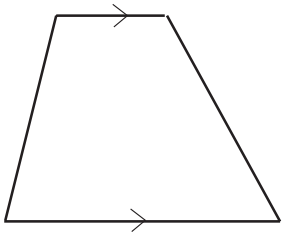
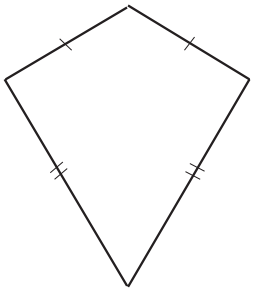


Order of rotational symmetry = ☐

Order of rotational symmetry = ☐

OS 15.6 *Special Quadrilaterals*

There are many special types of quadrilaterals; the following table lists some of them and their properties.

Quadrilateral	*Properties*	
Rectangle	4 right angles and opposite sides equal	
Square	4 right angles and 4 equal sides	
Parallelogram	Two pairs of parallel sides and opposite sides equal	
Rhombus	Parallelogram with 4 equal sides	
Trapezium	Two sides are parallel	
Kite	Two pairs of adjacent sides of the same length	

OS 15.7 *Naming Quadrilaterals*

Name each of the following quadrilaterals: