# Teaching notes

This numeracy wrap addresses the following syllabus outcome from the NSW Mathematics K-10 Syllabus 2012, © Board of Studies NSW:

* MA5.2-14MG – Calculates the angle sum of any polygon and uses minimum conditions to prove triangles are congruent or similar

Students will:

* measure the interior angles of a polygon and find the angle sum
* explore the angle sums of several polygons and deduce a general result
* investigate the exterior angle sum of a convex polygon.

## Section 1 – Unravel the mysterious pattern

Calculating from measurements made with a protractor can help students to understand the concept of an interior angle sum and to trust the generalised result.

## Section 2 – What have you discovered?

A class discussion where students share what they have learnt from Step 1 could help students to approach Step 2.

## Section 3 – Learn more

Students will benefit from a discussion about mathematical proof. The difference between a proof and an illustration could be explained.

The Geometer’s Warehouse comprises 70 dynamic html worksheets, each exploring a different outcome in Stage 4 and Stage 5 geometry. A unique characteristic of the resource is that when screen figures are dragged, angle and length measurements are updated automatically, allowing students to recognise and explore invariant properties.