Professor Pythagoras' Mathematical Marvels

Last week we investigated triangles. This week, let's look at some more 2D shapes, or POLYGONS. In my language - Ancient Greek - 'poly' means 'many' and 'gon' means 'angle', so a 'polygon' is a shape with many angles.

Let's start by taking my Polygon Quiz.

Many shapes get their English names from Ancient Greek or Latin: see if you can name the shape and match it up with the right Greek or Latin number word. The first one has been done to show you how.

deka
(Ancient Greek)
ten

tria
(Ancient Greek)
three

octo
(Ancient Greek)
eight

pente
(Ancient Greek)
five

quattuor
(Latin)
four

nonus
(Latin)
nine

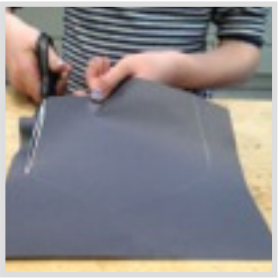
hex
(Ancient Greek)
six

hepta
(Ancient Greek)
seven

quadrilateral

Years 5 & 6: Mosaic Polygons

Now let's have some fun making mosaic polygons…



Step 1: Choose a polygon template, and draw around it in pencil on a black piece of paper. Cut the polygon out.

Step 2: Work out or measure the angles in your polygon. Make a note of them on a piece of paper or whiteboard.

Step 3: To make your mosaic 'tiles', cut small squares from coloured paper. Make sure you have a variety of bold colours.

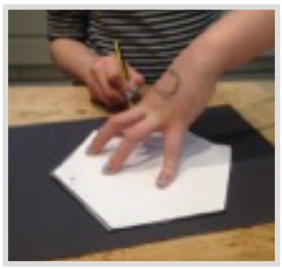
Step 4: Use the mosaic tiles to decorate your polygon. You may well find that you have to cut up squares to get them to fit along the edges and in the angles!

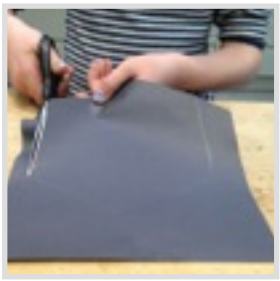
Step 5: Choose the right name label for your polygon and stick it on your shape.

Step 6: Fill in and stick on the 'angle information' labels.

Years 3 & 4: Mosaic Polygons

Now let's have some fun making mosaic polygons…





Step 1: Choose a polygon template, and draw around it in pencil on a black piece of paper. Cut the polygon out.

Step 2: Work out what kind of angles are in your polygon - acute, obtuse or right angles. Make a note of them on a piece of paper or whiteboard.

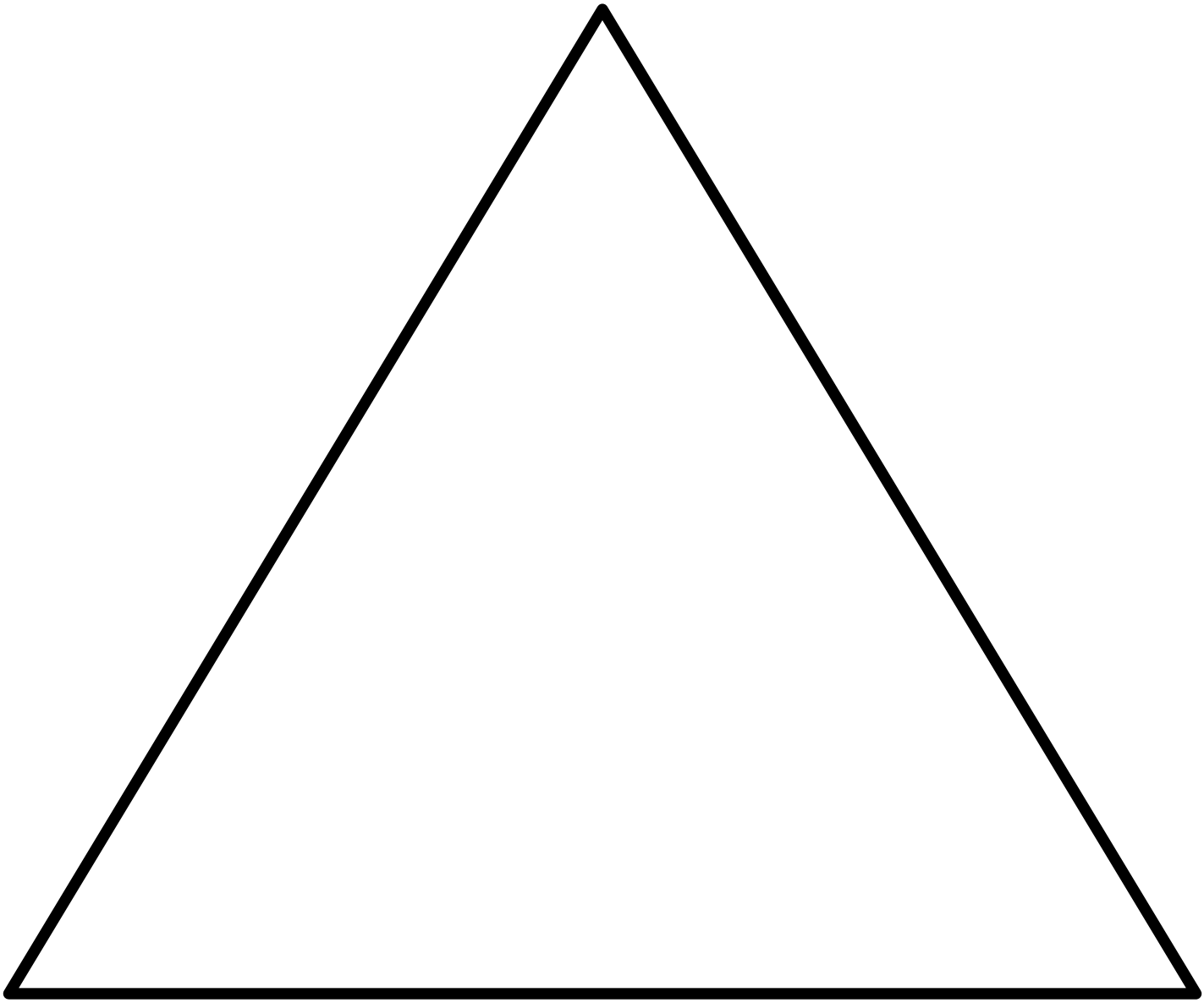
Step 3: To make your mosaic 'tiles', cut small squares from coloured paper. Make sure you have a variety of bold colours.

Step 4: Use the mosaic tiles to decorate your polygon. You may well find that you have to cut up squares to get them to fit along the edges and in the angles!

Step 5: Choose the right name label for your polygon and stick it on your shape.

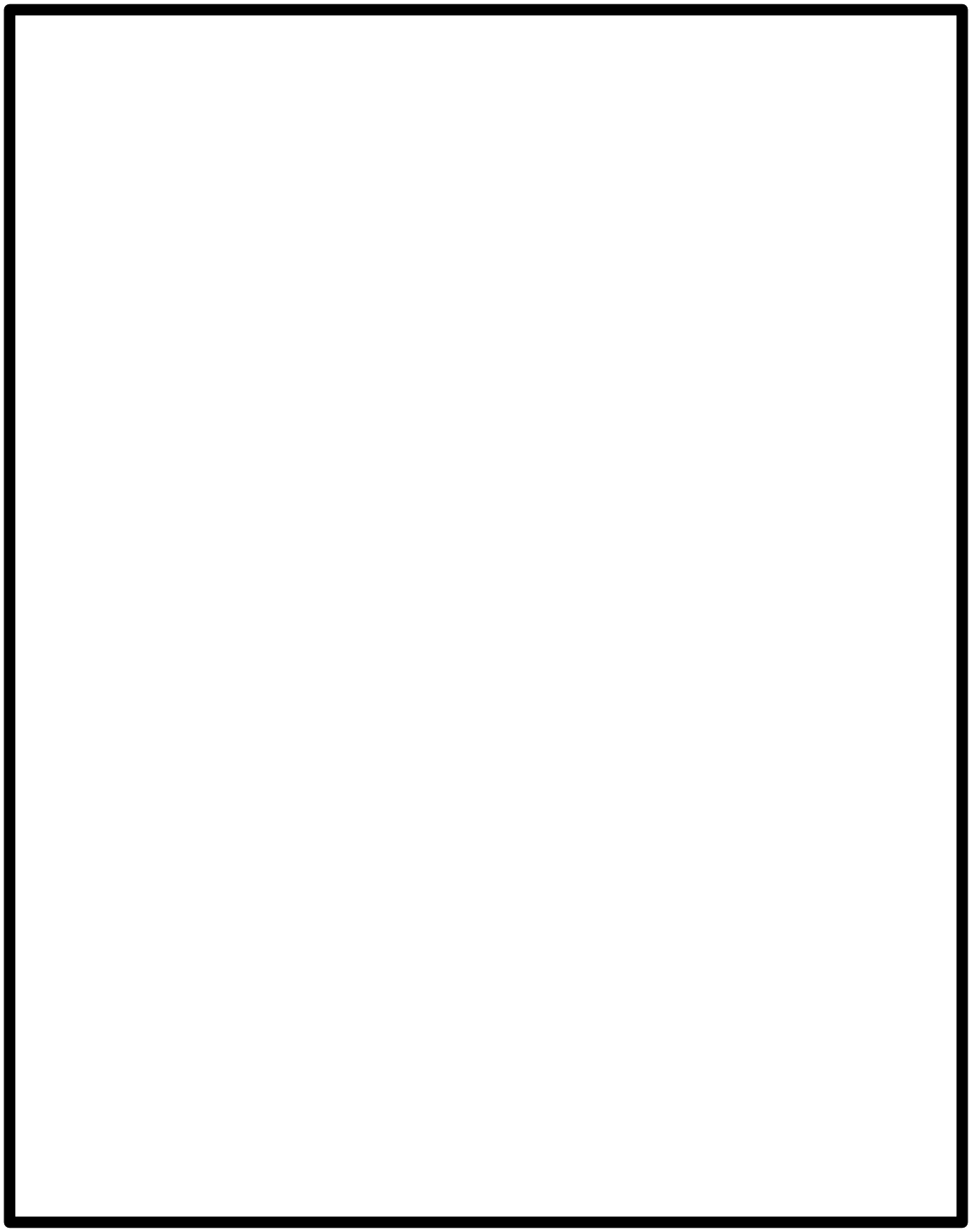
Step 6: Choose and stick on the correct 'angle information' labels.

polygon templates



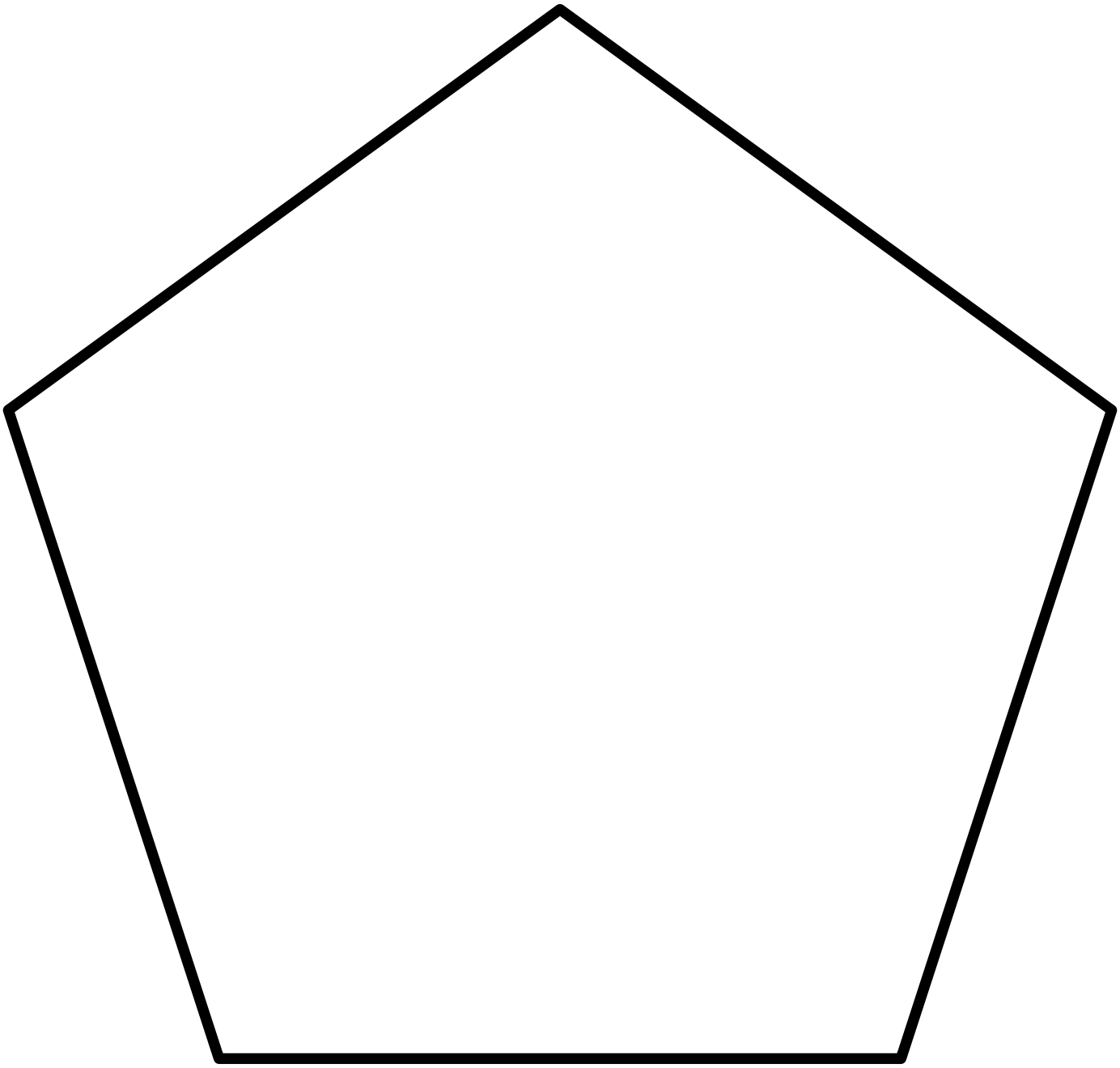
equilateral triangle

polygon templates



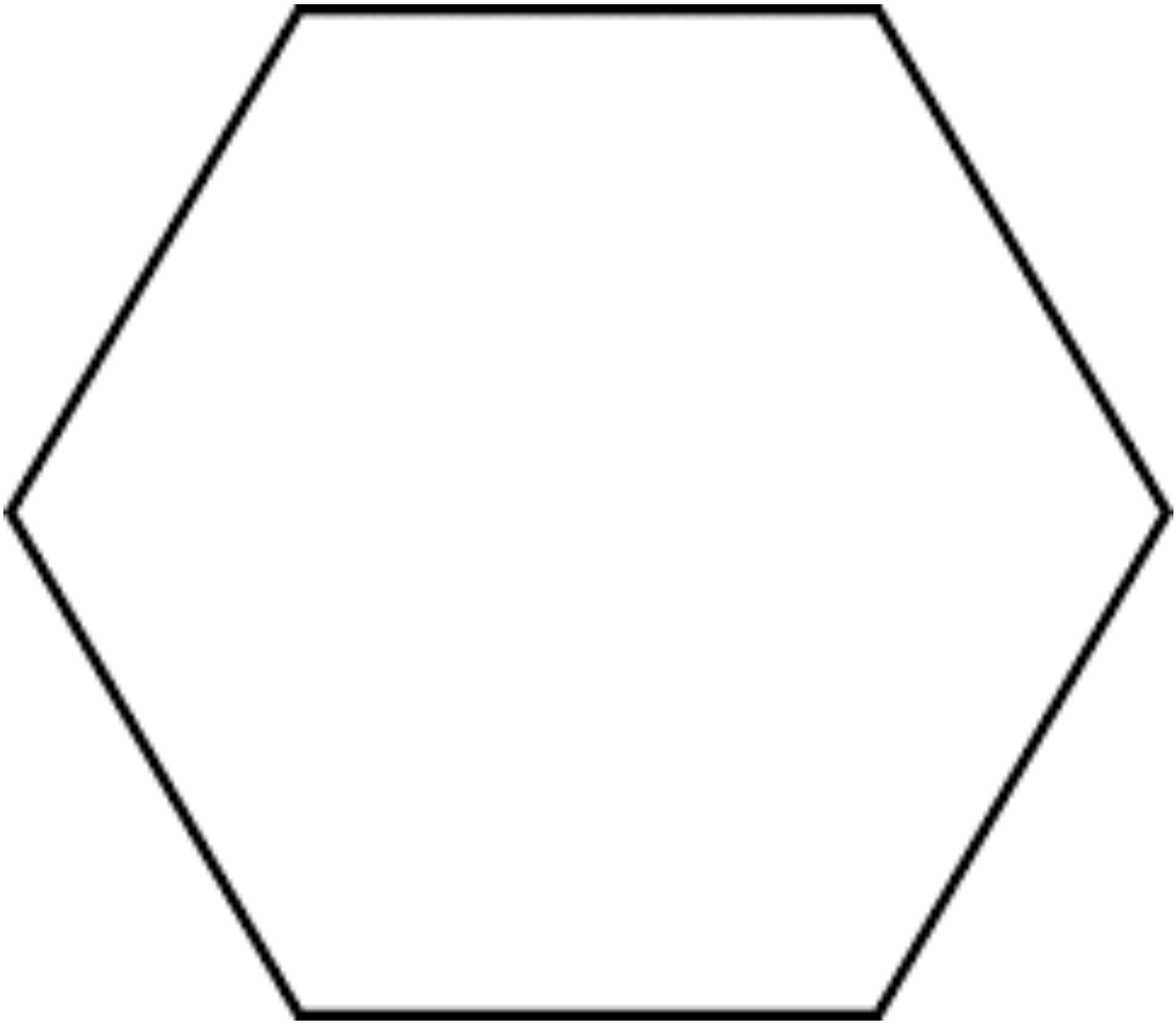
rectangle (quadrilateral)

polygon templates



regular pentagon

polygon templates

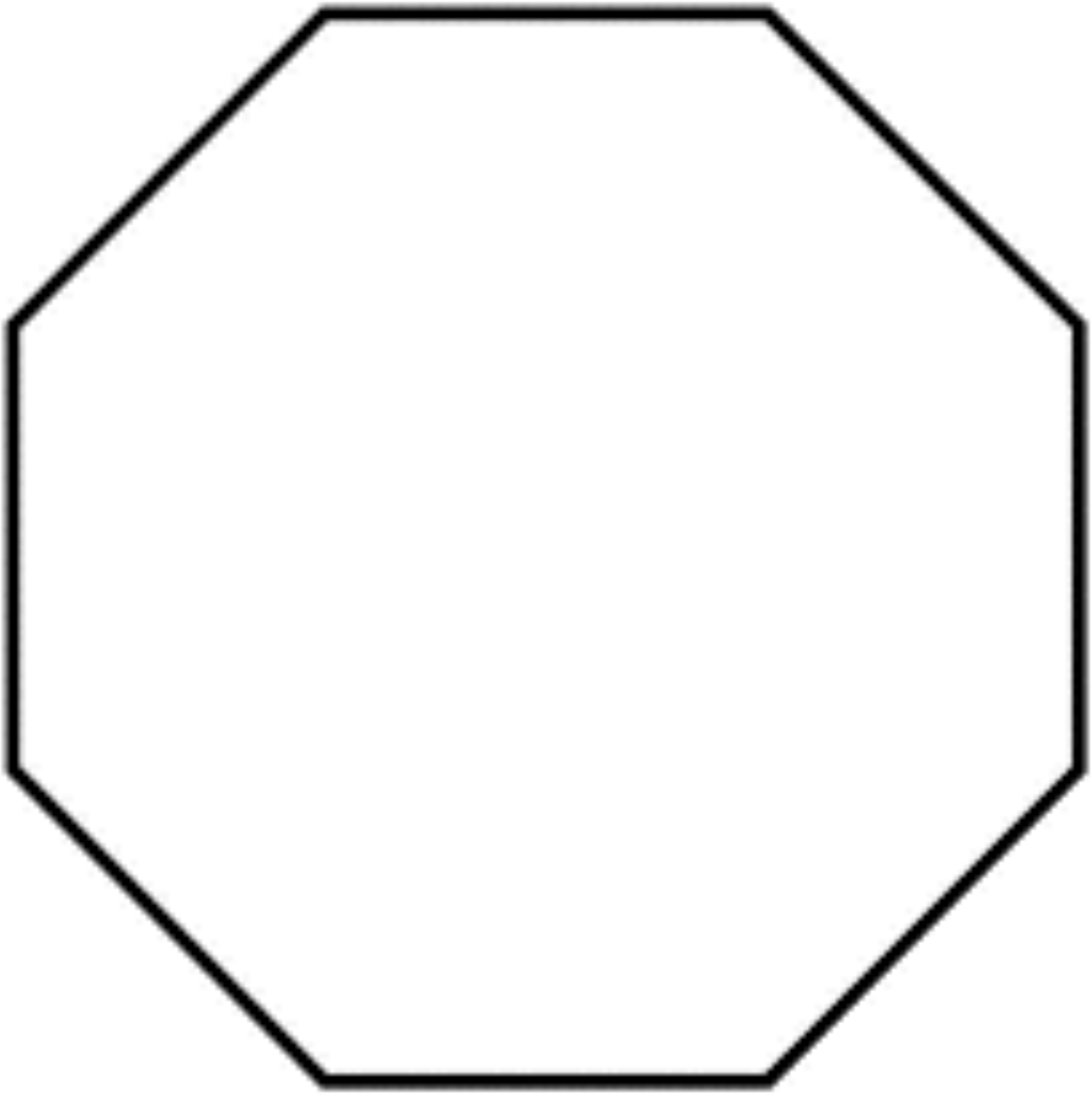


regular hexagon

polygon templates

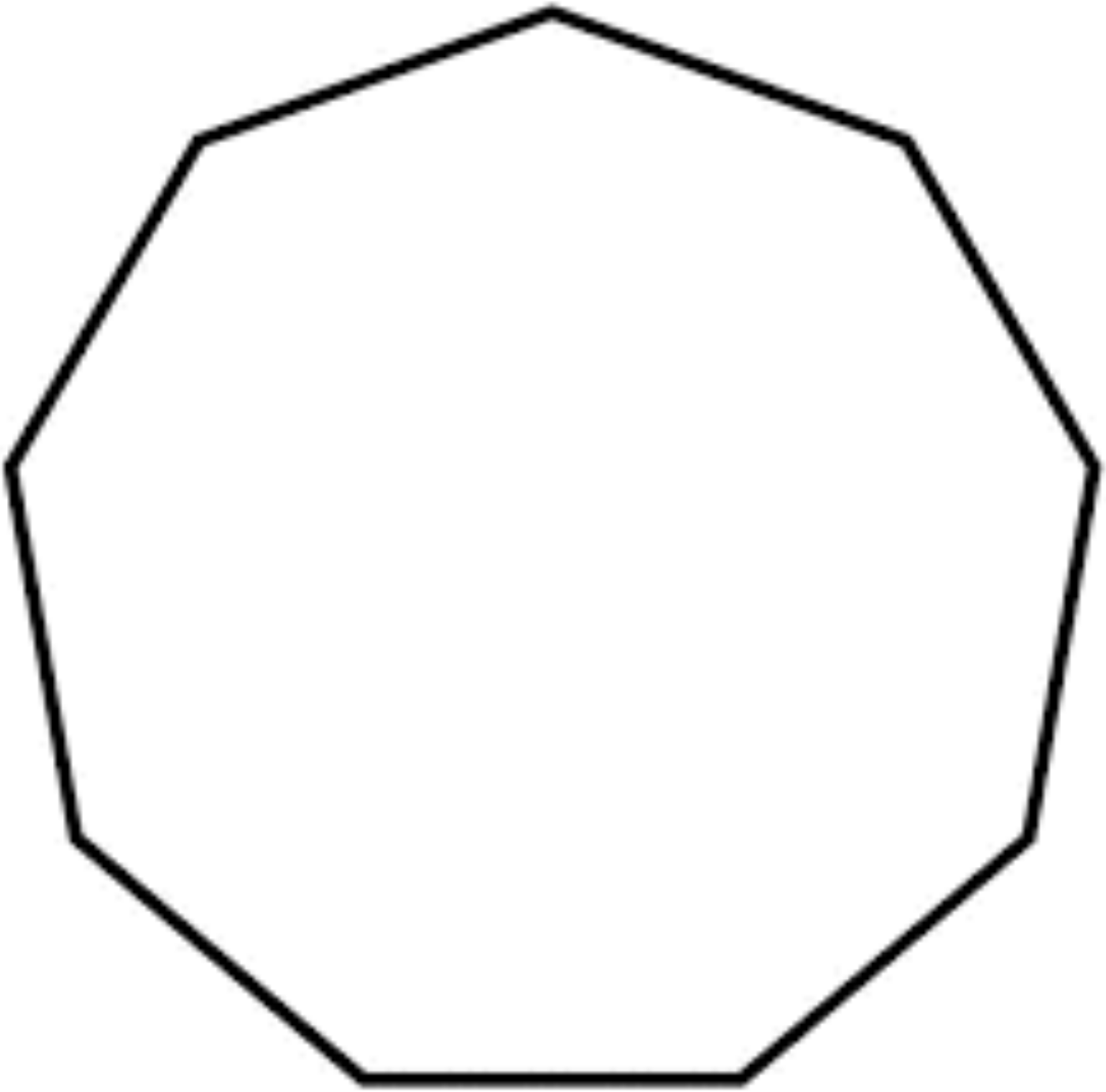
regular heptagon

polygon templates



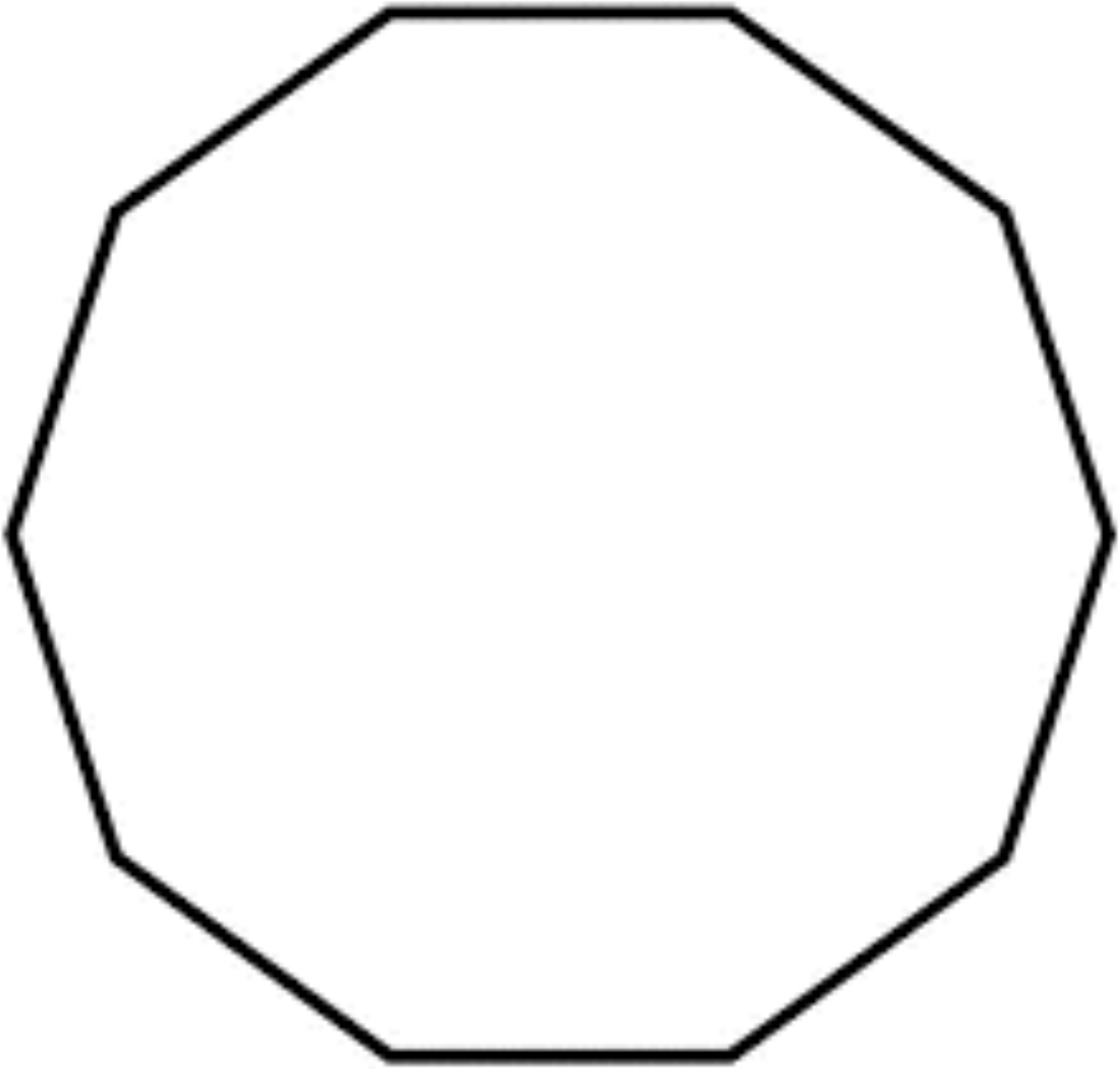
regular octagon

polygon templates



regular nonagon

polygon templates



regular decagon

polygon labels and angle info Y5-6

TRIANGLE

tria - three
(Ancient Greek)

QUADRILATERAL

quattuor - four
(Latin)

PENTAGON

pente - five
(Ancient Greek)

HEXAGON

hex - six
(Ancient Greek)

HEPTAGON

hepta - seven
(Ancient Greek)

OCTAGON

octo - eight
(Ancient Greek)

NONAGON

nonus - nine
(Latin)

DECAGON

deka - ten
(Ancient Greek)

this angle is ..... °

this angle is ..... °

this angle is ..... °

this angle is ..... °

each angle in this regular polygon measures ..... °

polygon labels and angle info Y3-4

TRIANGLE

tria - three
(Ancient Greek)

QUADRILATERAL

quattuor - four
(Latin)

PENTAGON

pente - five
(Ancient Greek)

HEXAGON

hex - six
(Ancient Greek)

HEPTAGON

hepta - seven
(Ancient Greek)

OCTAGON

octo - eight
(Ancient Greek)

NONAGON

nonus - nine
(Latin)

DECAGON

deka - ten
(Ancient Greek)

this angle is acute

this angle is acute

this angle is acute

this is a right angle

this is a right angle

this is a right angle

this is a right angle

this angle is obtuse

this angle is obtuse

this angle is obtuse