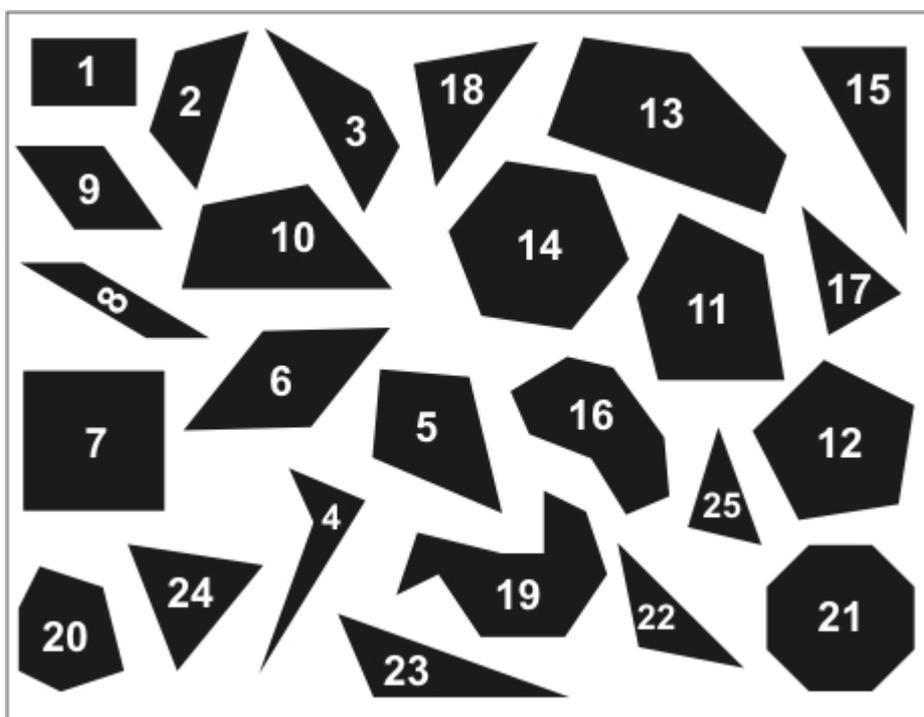


Portfolio task 7.1

Look at the polygons below:



Classify them in any way you like, into as many groups as you like. When you have completed this task explain your classification to a friend. Then classify them in a different way. Finally, name as many of the polygons as you can. *(This activity is taken from many of the free online resources provided by the National Council of Teachers of Mathematics in the USA. This activity can be found at <http://illuminations.nctm.org/LessonDetail.aspx?ID=L277>.) Source: Reprinted with permission from <http://illuminations.nctm.org>, copyright 2009 by the National Council of Teachers of Mathematics. All rights reserved.*

Portfolio task 7.2

Look at the shapes you sorted earlier in the chapter. For your portfolio sort them into groups using the vocabulary you have been introduced to above – so you may sort into concave and convex, regular and irregular, and so on – and draw them.

Portfolio task 7.3

Try this activity – the folding helps you understand ideas of symmetry and the surprises when you unfold the shape support you in 'noticing' the properties of the shapes. Children find it motivating too as it develops their skills of visualisation as they have to try and 'picture' the shape that will emerge when they unfold the paper.

Take a piece of A4 paper and make one fold anywhere – you do not have to fold it in half. Make a cut so that you form two shapes out of the piece of paper. Sketch the two shapes that you have made and name them. Can you find ways to fold and cut the paper so that you make a square, a rhombus, a rectangle, a parallelogram, a trapezium and a kite?

Portfolio task 7.4

Draw the regular polygons given in the table earlier in this chapter. Find all the lines of symmetry for each shape. What do you notice about the result? Why do you think this is the case?