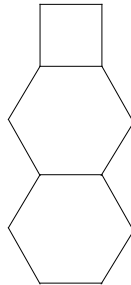# POLYCOMBOS

Geo-Pro contains several regular polygons of side length 1 cm. These may be attached along sides to form combinations or groups of regular polygons, which we will refer to here as 'polycombos'. A polycombo containing two hexagons and one square is shown below.

1. See how many other polycombos containing 2 hexagons and 1 square you can find, sketching each one using a Geo-Pro.

2. Now find as many polycombos as you can that contain one more square than those from question 1 (i.e. that contain 2 hexagons and 2 squares). One approach is to add a square in as many ways as possible to each polycombo you found in question 1.
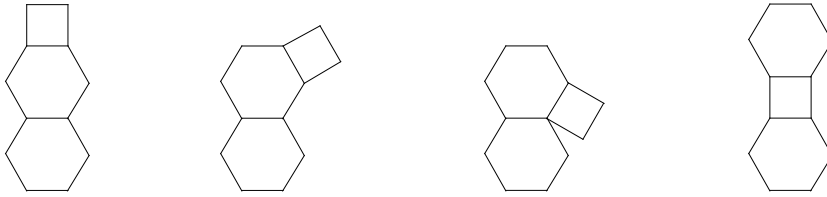
Extension.
Investigate how many polycombos there are made up of other combinations of regular polygons, for example:

- 2 pentagons and 2 triangles

- 2 octagons and 2 triangles

- 3 hexagons and 4 squares

- 4 squares and 4 triangles

- 2 pentagons and 2 hexagons   etc.

1.   There are 4 different polycombos containing two hexagons and one square.

2.   27 different polycombos containing two hexagons and two squares are shown below.