

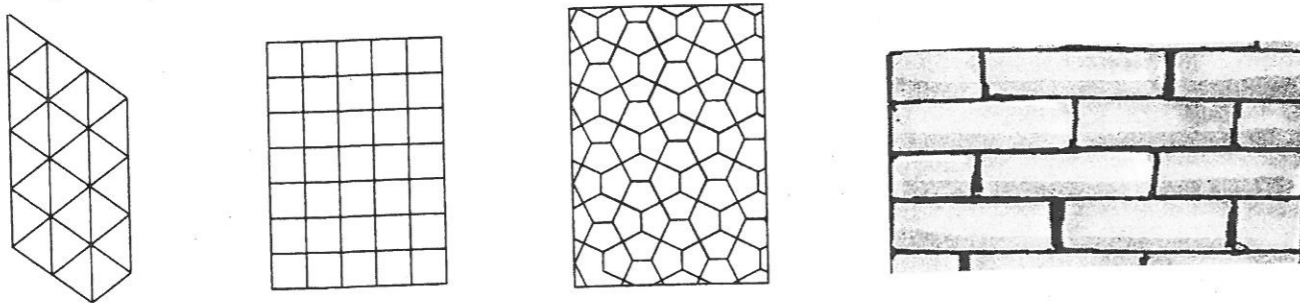


### Activities (continued)

2. Discuss the following in pairs or groups (give reasons for your answers).
- a) Is a rectangle a parallelogram?
  - b) Are all parallelograms squares?
  - c) Are all squares parallelograms?
  - d) Is a trapezium a parallelogram?

### Tessellation

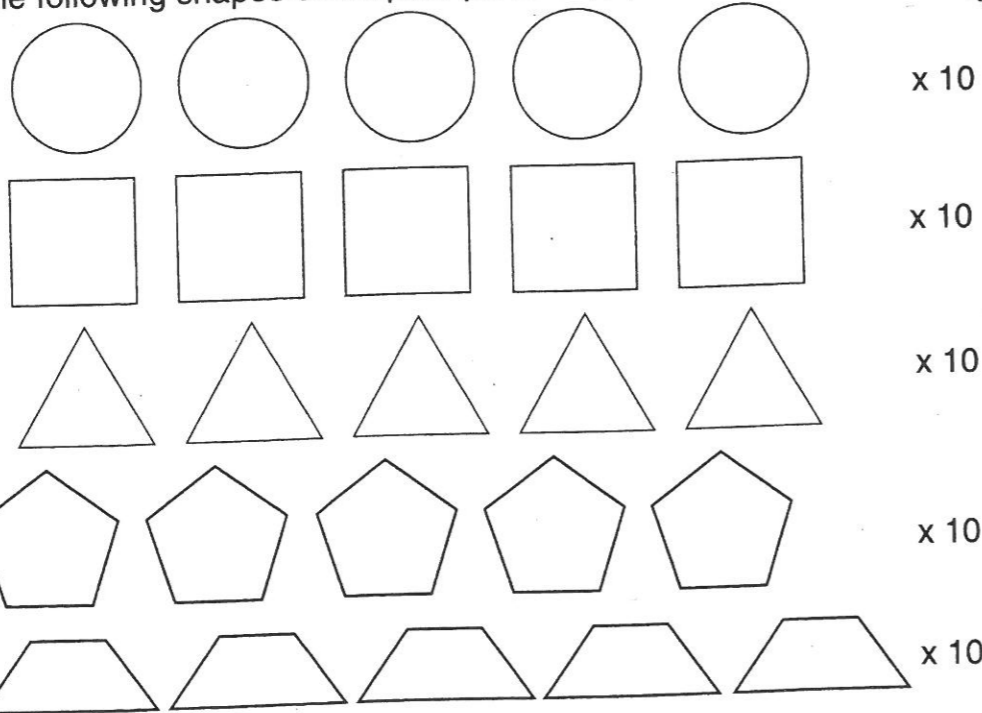
Quadrilaterals and triangles are also of special importance to mathematicians because they always fit together. Look at the following patterns.



Shapes **tessellate** if they fit together so as to cover a flat surface leaving no gaps and with no overlapping.

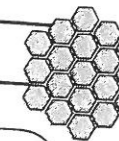
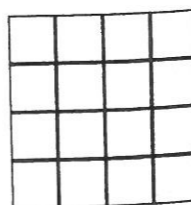
### Group activity

1. Trace the following shapes on a spare piece of paper 10 times.

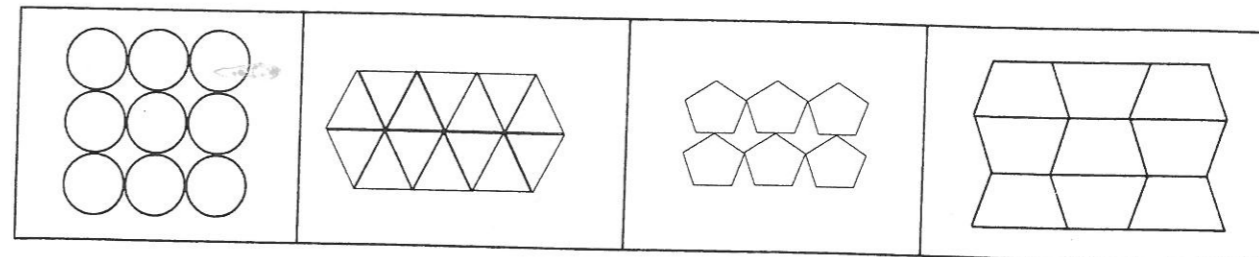


2. Then cut them out.  
3. Now try to find ways to join the different shapes together so that the pieces don't overlap and there are no gaps or empty space in between. You must join the circles with the circles, the triangles with the triangles, and so on.

For example:  
If you use squares, this is how you could make them fit together.



You will have noticed that not all the shapes in the previous activity are able to fit together or tessellate. The circles and pentagons aren't able to tessellate. But triangles and quadrilaterals are always able to tessellate. That is one reason why they are so important to mathematicians.



### Regular polygons

### Activities

1. Use your protractor to measure each of the angles inside the following polygons.

