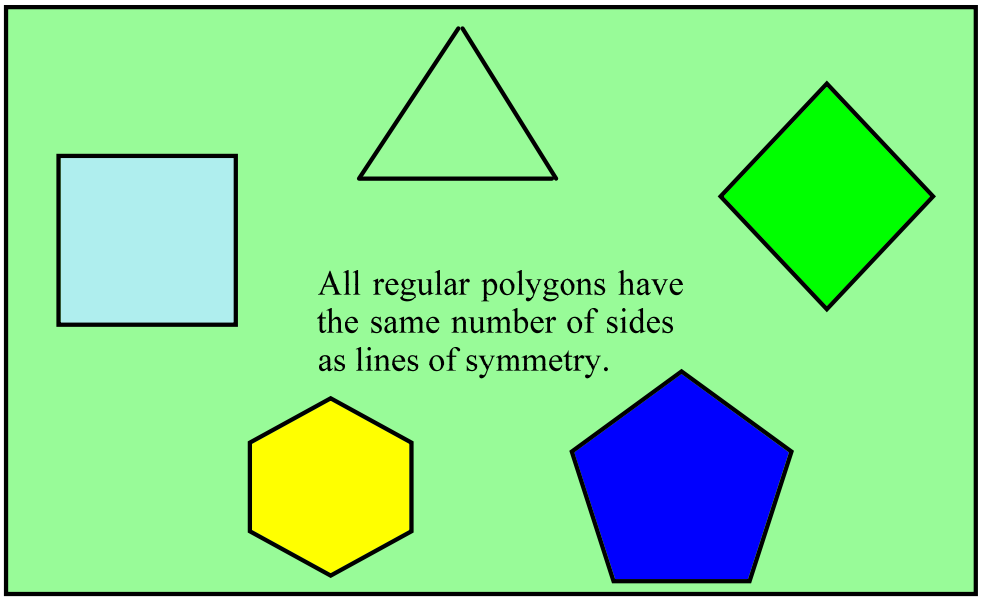
Polygons



Is this statement correct?

Investigate regular polygons with 3, 4, 5, 6, 7, 8, 9 and 10 sides.

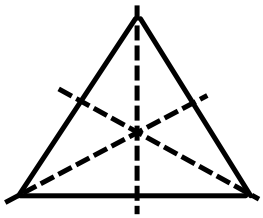
Can you work out the angles of each shape?

What patterns can you find?

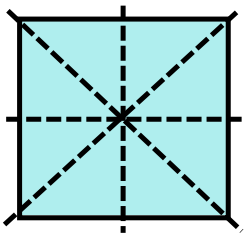
Learning and Teaching Objectives

- Use drawings or annotations to help visualise the problem
- Use a systematic approach to solve the problem
- Choose and use a suitable way of recording

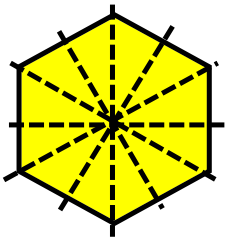
Polygons Solution



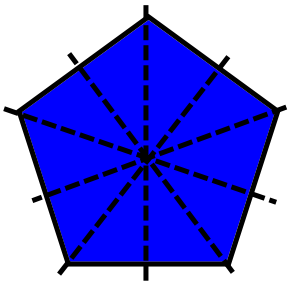
3 lines of symmetry
60 degrees



4 lines of symmetry
90 degrees



6 lines of symmetry
120 degrees



5 lines of symmetry
108 degrees

heptagon - 7 lines of symmetry - between 129 and 130 degrees
octagon - 8 lines of symmetry - 135 degrees
nonagon - 9 lines of symmetry - 140 degrees
decagon - 10 lines of symmetry - 144 degrees

(A 50p coin is an easily accessible model for a heptagon)

Investigating the pattern in the degrees as the number of sides increases is an interesting extension for this problem