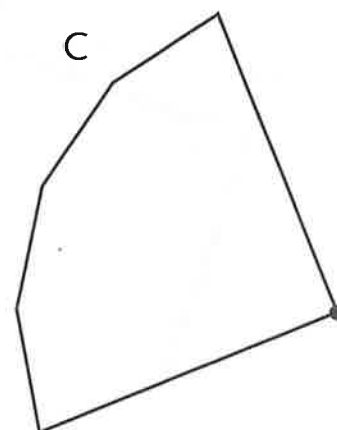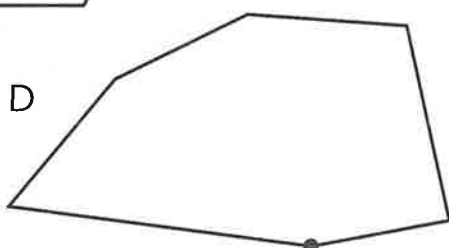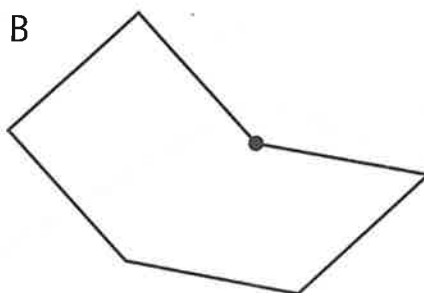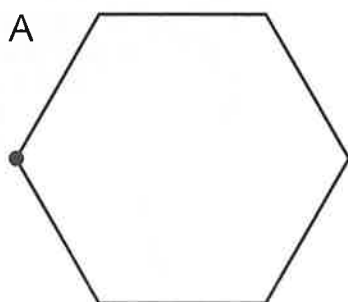Name: _____ Date: _____

Dazzling diagonals

Investigate diagonal lines drawn in polygons

You will need:
- ruler
- red pencil

A

B

C

D

1 a For each hexagon, using a red pencil, draw straight lines to join the vertex marked by a black dot to the three non-adjacent vertices.

b Look at each triangle in turn and mark any equal sides.
Shade triangles with pairs of equal sides in red.

2 a On the circle, use straight lines to join the points 1 to 2, 2 to 3, 3 to 4 and so on.

b Count the number of sides of the shape.

☐ sides.

c Draw all the diagonals, joining non-adjacent vertices with straight lines.

d Count the number of diagonals at each vertex.

☐ diagonals