**Properties of 2D Shapes – www.m4ths.com – Steve Blades ©**

(1) Explain what is meant by a 'regular shape'

(2) Each shape below is a **regular polygon** (shape with 3 or more sides). Name each shape, draw all of the lines symmetry and state the order of rotational symmetry.
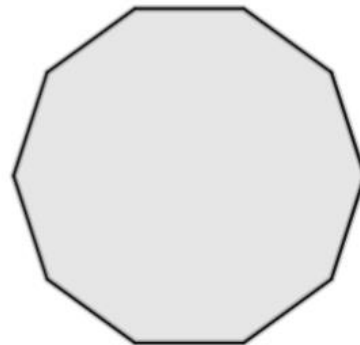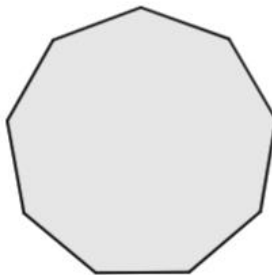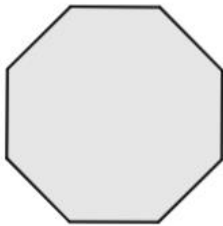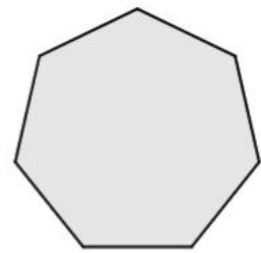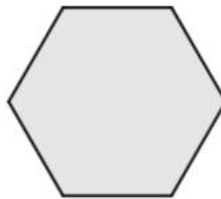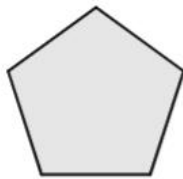
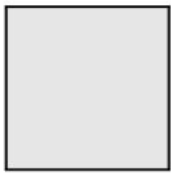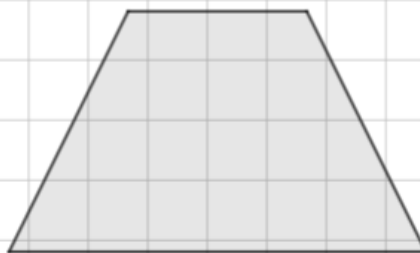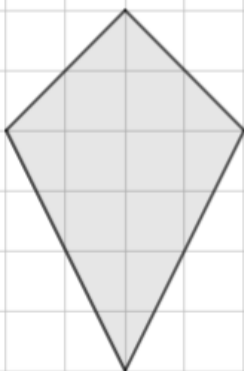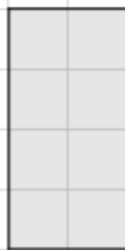(3) The diagrams below show a range of quadrilaterals. For each (a) Name the shape (b) Show which sides are parallel (using the correct arrows) (c) Show which lines are of the same length (Using small lines) (d) Draw any lines of symmetry and (e) State the order of rotational symmetry. USE THE GRID TO HELP YOU.

(4) On the back of the page, draw a shape with 3 lines of symmetry and an order of rotational symmetry of 3.

(5) On the back of the page, draw a shape with no rotational symmetry but one line of symmetry.

(6) On the back of the page, draw a pentagon with no lines of symmetry and no rotational symmetry.

(7) If a regular polygon has N sides, what is the order of its rotational symmetry?

(8) Find a shape that has infinitely many lines of symmetry

(9) Draw a shape with a pattern on that has 2 lines of symmetry and an order of rotational symmetry of 2

(10) Arrange 5 one cm squares such that the shape has 4 lines of symmetry and rotational order of 4.

(11) Arrange 3 one cm squares such that there is one line of symmetry but no rotational symmetry.