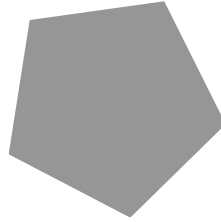


1. Draw a cube with 3 faces showing and 3 faces hidden. Use dotted lines for the hidden edges.

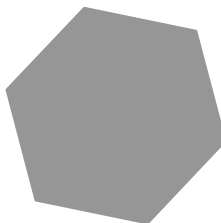
2. How many *cm cubes* are needed to make a larger cube which has 4 *cm cubes* along any one of its edges?

3. How many *cm cubes* are needed to make a larger cube which has 9 *cm cubes* on any one of its faces?

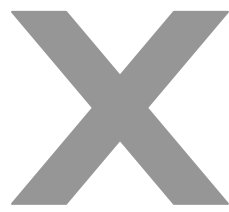
4. Identify and draw line or lines of symmetry in the following shape.



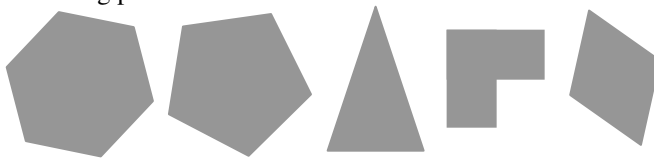
5. How many lines of symmetry are there in the following shape?



6. Identify and draw line or lines of symmetry in the following shape.



7. Identify the shapes that can be used alone to make a tessellating pattern.



A B C D E

8. Which one or more of the shapes in Q7 can be used alone to make a **regular** tessellating pattern? Draw two other shapes (not shown in Q7) that can be used alone to make a **regular** tessellating pattern.

9. Only three shapes can be used alone to make a **regular** tessellating pattern. The interior angles of each of the three shapes are equal. Complete the following table.

Interior angle measure	Name of the shape
60°	
90°	
120°	

10. Complete the following divisions:
 $360 \div 60 =$
 $360 \div 90 =$
 $360 \div 120 =$
 (a) Can you describe which types of shapes can be used alone to make a **regular** tessellating pattern?
 (b) Can you explain why **only three shapes** can be used alone to make a **regular** tessellating pattern?

Numerical, algebraic and worded answers.

10. 6, 4, 3
 (a) Regular polygons with interior angles that can divide 360° exactly.
 (b) The next number higher than 120° and divide 360° exactly is 180°, but the interior angle of any regular polygon is always less than 180°.

2. 64
 3. 27
 4. 6
 5. 6
 7. A, C, D and E
 8. A only
 9. Equilateral triangle, square, regular hexagon