

Strand 2 Chapter 6 Geometry 2 Enlargements and Constructions

1. Given the **centre of enlargement** and the **scale factor k**, I can **construct an image of a given object**.
2. I can construct an image of an object **when the centre of enlargement is at the vertex of the object**.
3. I can construct an image of an object **when the centre of enlargement is inside the object**.
4. **Given a diagram** of an object and its enlarged/reduced image, **I can find the centre of enlargement and measure to find the scale factor k**.
5. I know that the **scale factor k = length of image side / length of corresponding object side**
 $K > 1$ the figure is enlarged
 $K < 1$ the figure is reduced
6. I can find lengths and ratios of image and object sides.
Example 1 Page 168
7. I know that when a figure is enlarged by a scale factor k, the **area of the image figure is increased by a scale factor of k^2**
 $K^2 = \text{area of image} / \text{area of object}$
Example 2 and 3 Page 169
8. I know that when a figure is enlarged by a scale factor k, the **volume of the image figure is increased by a scale factor of k^3**
 $K^3 = \text{area of image} / \text{area of object}$
Example 4 Page 170
9. I know that when solving enlargement problems that I must be very clear as to which represents the image and the object. i.e. an existing town/ statue is actually the image of the object that is the scale drawing/map!
10. I know that when solving problems associated with enlargement that it is important to find the value of k as per object/image lengths before using this k in area or volume calculations.
Ex 6.1 Q2 – Q26 Page 171
11. I can construct an angle of 60°
12. I can construct a **tangent to a circle at a given point on it**.
13. I can construct a **parallelogram, given the lengths of the sides and the measures of the angles**.
14. I can construct **the circumcircle of a triangle**.
15. I can construct **the incircle of a given triangle**.

16. I know that a **Median is the line segment joining the vertex of a triangle to the midpoint of the opposite side and that the intersection of 2 Medians gives the Centroid of a triangle.**
17. I can construct **the orthocentre of a triangle by finding the intersection of the altitudes (the perpendicular line segment drawn from the vertex of a triangle to the opposite side).**
18. I know that any point on the perpendicular bisector of the line segment [AB] is equidistant from A and B and can prove this.
19. I know that any point on angle bisector is equidistant from the arms of the angle and can prove this.

Ex 6.2 Q2 – Q18 Even Page 180