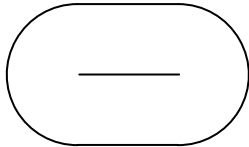


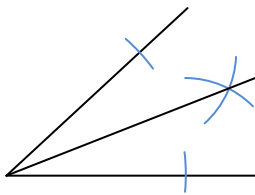
**Locus** (pl. **loci**) means 'place'. A locus shows all the places a point could be to satisfy given conditions.

The locus from a **line segment** is a sausage shape – two parallel lines with a semi-circle at each end.



**Angle bisector**

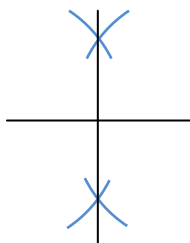
Splits an angle into two equal angles.



Gives the locus of points equidistant from two lines.

**Perpendicular bisector**

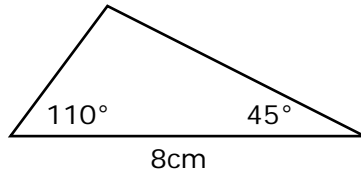
Splits a line segment into two equal parts at 90°.



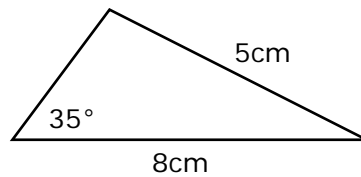
Gives the locus of points equidistant from the two points at the end of the original line.

*Remember to give workings for your answers!*

1. Accurately construct a triangle with sides 5cm, 8cm and 6cm.
2. Accurately construct:



3. Accurately construct:



4. Construct a perpendicular bisector of a 5cm line segment.
5. Draw any acute angle and bisect it.
6. Draw the locus of a point 2cm away from an 8cm straight line.
7. Points A and B are 10cm apart. On an accurate diagram, shade the area which is nearer to A than B, and within 6cm of B.

8. Construct a 60° angle.

9. On the triangle you constructed in Q1, draw a perpendicular from the highest point to the 8cm base of the triangle.

HINT: you may need to lengthen the base!

**60° angle**  
Construct part of an equilateral triangle.

Bisect this angle to get a 30° angle.

Draw construction lines lightly in **pencil**.

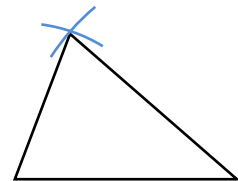
Always leave **construction lines** visible – the examiner may award marks for them.

**Construct** means draw accurately.

The locus from a **single point** is a circle (with that point as the centre).

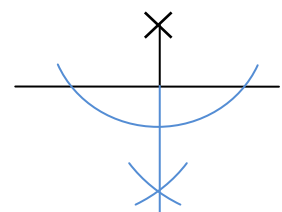
**Constructing triangles**

You must use compasses if only given the side lengths.



**Perpendicular from a point to a line**

Draw an arc from the point which crosses the line in two places. Use this to form a perpendicular bisector.



Gives the shortest distance from the point to the line.

## Teaching notes

This resource contains a selection of questions accompanied by revision notes. The notes are colour coded to give students an indication of the GCSE grade they are working towards, useful in self or peer assessment:

- **blue:** grades G – E
- **green:** grades D/C
- **red:** grades B – A\*

You can choose whether to reveal the grades before or after students complete the questions.

## Suggested uses

- ❖ Use as an individual revision sheet, homework, cover work, open book test, etc.
- ❖ Photocopy onto A3 and use as a poster during revision season.
- ❖ Laminate and tape to the desk for small group revision. You could create 'revision stations' with other Desktop revision resources on [www.teachitmaths.co.uk](http://www.teachitmaths.co.uk) (quick search: 'desktop').

## Giving answers

You may wish to provide students with an acetate sheet of answers – students can lay it over their own work to determine how accurate they have been.