

### Learning Objectives

L6: Construct triangles using ruler and compasses or protractor

L6: Construct the perpendicular bisector of a line

L6: Construct the perpendicular from a point on a line

L6: Construct the bisector of an angle

L7: Find loci to produce shapes and paths

L7: Construct Loci using compasses and/or ruler

L6: Draw plans and elevations given 3-D shapes

L6: Draw a sketch of the 3-D shape given plans and elevations

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Why not visit the library to help with the more challenging problems?

What if you get stuck?

- ◇ Ask a friend
- ◇ Ask your teacher

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### Websites

GCSE Bitesize

### Resources

Books

Textbooks

Mathematical dictionary

Exercise book

### Equipment

Protractor

Pencil

Ruler

Compasses

## Takeaway Maths

Constructions  
& 3D shapes



Due in:

\_\_\_\_\_

\_\_\_\_\_

### Rules

You must spend a minimum of £12.

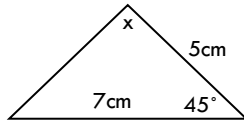
## Starter

Accurate use of equipment is required.

### 1. SAS triangle

£2.00

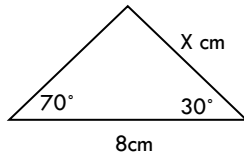
Construct this triangle accurately and measure the marked angle



### 2. ASA triangle

£2.00

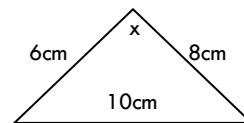
Construct this triangle accurately and measure the marked angle



### 3. SSS triangle

£2.00

Construct this triangle accurately and measure the marked angle



### 4. Basic Loci

£2.20

Accurately draw the loci of a point moving exactly 2cm from a 6cm line.

### 5. Plan

£2.50

Draw an accurate plan of your bedroom, including any large items of furniture.

## Main Course

Accuracy is crucial in being successful with these problems. Sub-standard work will be returned

### 6. Perpendicular bisector

£3.50

Draw a line which is bigger than 6cm, but smaller than 13cm.

Construct the perpendicular bisector

### 7. Angle bisector

£3.75

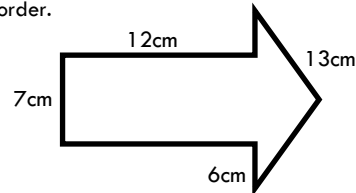
Draw an angle between 90° and 180°

Construct the angle bisector

### 8. Loci problem

£3.50

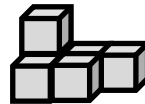
This symmetrical arrow needs a border which is exactly 5cm wide all around it. Copy the diagram and complete the border.



### 9. Elevation

£3.75

Draw the elevation of this 6 cube solid from the front, back, left and right.



### 10. Revision poster

£3.99

Create a revision poster for the types of triangles in 1-3, with your own examples



## Dessert

You can pig out on dessert if you wish!

However, you cannot repeat items you had earlier in the meal.

### 11. Perpendicular bisector

£4.50

Write step by step instructions for constructing a perpendicular bisector. Give an example.

### 12. Angle bisector

£4.50

Write step by step instructions for constructing an angle bisector. Give an example.

### 13. Loci treasure hunt

£5.00

Design your own loci treasure hunt, with solution sheet. You must have at least 3 clues and use scale drawing.

### 14. Elevation challenge

£5.00

Draw an accurate elevation of a famous building, the school or your house. It would be helpful to include a photograph.

### 15. Construction revision

£5.00

Create a revision resource or poster that covers all the L6 perpendicular lines and bisectors skills (see objectives)