KS3 AREA PROBLEMS

Introduction

Information for parents.

Throughout key stage 2, 3 and 4 students will revisit the idea of finding areas and perimeters, with increasingly complex shapes and problems. Students should be confident with the language of shapes and geometry, understanding the information given to you in the problem is vital when trying to solve that problem.

Some of the key vocabulary that is used in these problems and students will be expected to be familiar with
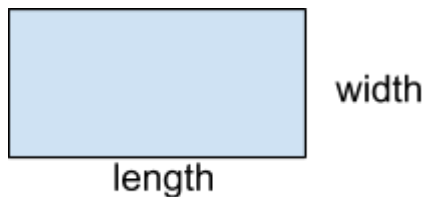
perimeter, area, interior, exterior, enclosed, midpoint, perpendicular, parallel, triangle, square, rectangle and trapezium

Information for students - you should be familiar with these facts and formulae.

Perimeter - the sum of all of the **exterior** edges of the shape.

Area - The space occupied inside the perimeter of the shape.

Rectangle

2 longer sides (length) 2 shorter sides (width)
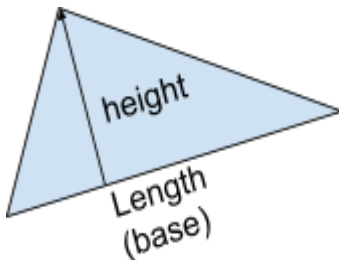
$$\text{Area} = length \times width$$

Square

All sides are equal

$$\text{Area} = length \times width$$

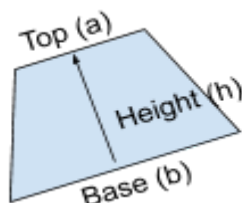**Triangle**

the height must be **perpendicular** to the base length

$$\text{Area} = \frac{Base \times height}{2}$$

Trapezium

Two **parallel** sides (a and b) and two non parallel

The height must be **perpendicular** to the base

$$\text{Area} = \frac{(a+b) \times h}{2}$$

The problems in this presentation are all based on the above shapes, they will require you to think carefully about what information has been given and how you can use it to answer the question.

In each case think about a diagram, add as much information to the diagram as you can, this should help you to see how to solve the problem.

The first presentation shows just the problems, try this first.

The second presentation has a few hints to help you get started.

The third presentation shows the solutions to check once you have had a go.