

Centre No.						Paper Reference						Surname	Initial(s)	
Candidate No.						1	3	8	0	/	3	H	Signature	

Paper Reference(s)

**1380/3H**

**Edexcel GCSE**

**Mathematics (Linear) – 1380**

**Paper 3 (Non-Calculator)**

**Higher Tier**

**Monday 7 June 2010 – Afternoon**

**Time: 1 hour 45 minutes**



Examiner's use only

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Team Leader's use only

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**Materials required for examination**

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.  
Tracing paper may be used.

**Items included with question papers**

Nil

**Instructions to Candidates**

In the boxes above, write your centre number, candidate number, your surname, initials and signature.

Check that you have the correct question paper.

Answer ALL the questions. Write your answers in the spaces provided in this question paper.

**You must NOT write on the formulae page.**

**Anything you write on the formulae page will gain NO credit.**

If you need more space to complete your answer to any question, use additional answer sheets.

**Information for Candidates**

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).

There are 27 questions in this question paper. The total mark for this paper is 100.

There are 24 pages in this question paper. Any blank pages are indicated.

**Calculators must not be used.**

**Advice to Candidates**

Show all stages in any calculations.

Work steadily through the paper. Do not spend too long on one question.

If you cannot answer a question, leave it and attempt the next one.

Return at the end to those you have left out.

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*Turn over*

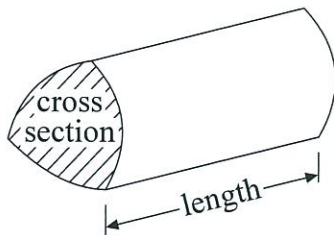
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# GCSE Mathematics (Linear) 1380

## Formulae: Higher Tier

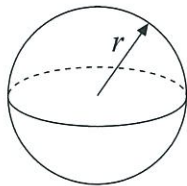
**You must not write on this formulae page.**  
**Anything you write on this formulae page will gain NO credit.**

**Volume of a prism** = area of cross section  $\times$  length



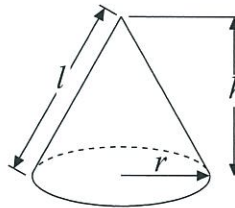
**Volume of sphere** =  $\frac{4}{3}\pi r^3$

**Surface area of sphere** =  $4\pi r^2$

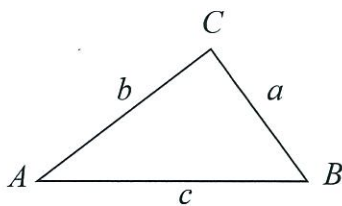


**Volume of cone** =  $\frac{1}{3}\pi r^2 h$

**Curved surface area of cone** =  $\pi r l$



**In any triangle ABC**



**The Quadratic Equation**

The solutions of  $ax^2 + bx + c = 0$

where  $a \neq 0$ , are given by

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

**Sine Rule**  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

**Cosine Rule**  $a^2 = b^2 + c^2 - 2bc \cos A$

**Area of triangle** =  $\frac{1}{2} ab \sin C$



Answer ALL TWENTY SEVEN questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. Simplify

$$6x + 9y + 2x - 3y$$

$$\underline{8x + 6y}$$

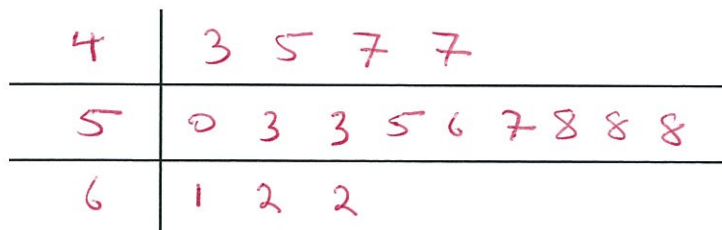
Q1

(Total 2 marks)

2. Here are the weights, in grams, of 16 eggs.

47	45	50	53	43	61	53	62
58	56	57	47	55	62	58	58

Draw an ordered stem and leaf diagram to show this information.  
You must include a key.



Key:  $4|3 = 43$

Q2

(Total 3 marks)



3.

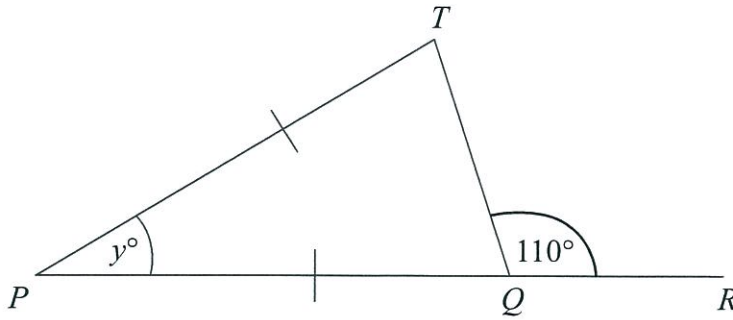


Diagram NOT accurately drawn

$PQR$  is a straight line.  
 $PT = PQ$ .

(i) Work out the value of  $y$ .

$$\begin{aligned}
 y &= 180 - 2(180 - 110) \\
 &= 180 - 2(70) \\
 &= 180 - 140 \\
 &= 40^\circ
 \end{aligned}$$

40°

(ii) Give reasons for your answer.

Angles across a straight line add to  $180^\circ$  (i.e. are supplementary)  
 Base angles of an isosceles triangle are equal  
 Angles of a triangle add to  $180^\circ$

Q3

(Total 4 marks)

