

FOR OFFICIAL USE

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	KU	RE
Total marks		

2500/403

NATIONAL
QUALIFICATIONS
2007

THURSDAY, 3 MAY
10.40 AM – 11.15 AM

MATHEMATICS
STANDARD GRADE
General Level
Paper 1
Non-calculator

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day Month Year

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Scottish candidate number

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Number of seat

- You may not use a calculator.**
- Answer as many questions as you can.
- Write your working and answers in the spaces provided. Additional space is provided at the end of this question-answer book for use if required. If you use this space, write clearly the number of the question involved.
- Full credit will be given only where the solution contains appropriate working.
- Before leaving the examination room you must give this book to the invigilator. If you do not you may lose all the marks for this paper.



FORMULAE LIST

Circumference of a circle: $C = \pi d$

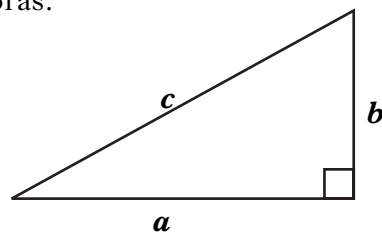
Area of a circle: $A = \pi r^2$

Curved surface area of a cylinder: $A = 2\pi r h$

Volume of a cylinder: $V = \pi r^2 h$

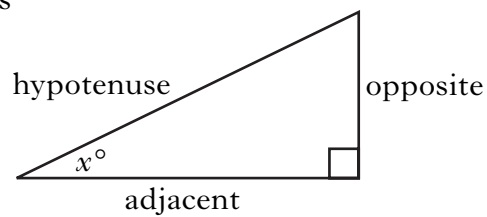
Volume of a triangular prism: $V = Ah$

Theorem of Pythagoras:



$$a^2 + b^2 = c^2$$

Trigonometric ratios
in a right angled
triangle:

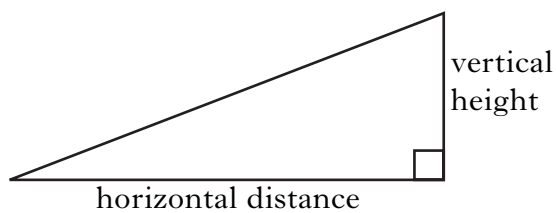


$$\tan x^\circ = \frac{\text{opposite}}{\text{adjacent}}$$

$$\sin x^\circ = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos x^\circ = \frac{\text{adjacent}}{\text{hypotenuse}}$$

Gradient:



$$\text{Gradient} = \frac{\text{vertical height}}{\text{horizontal distance}}$$

Marks

KU	RE
1	
1	
1	
2	
2	

1. Carry out the following calculations.

(a) $4.27 - 1.832$

(b) 6.53×40

(c) $372 \div 8$

(d) $5 \times 4\frac{1}{3}$

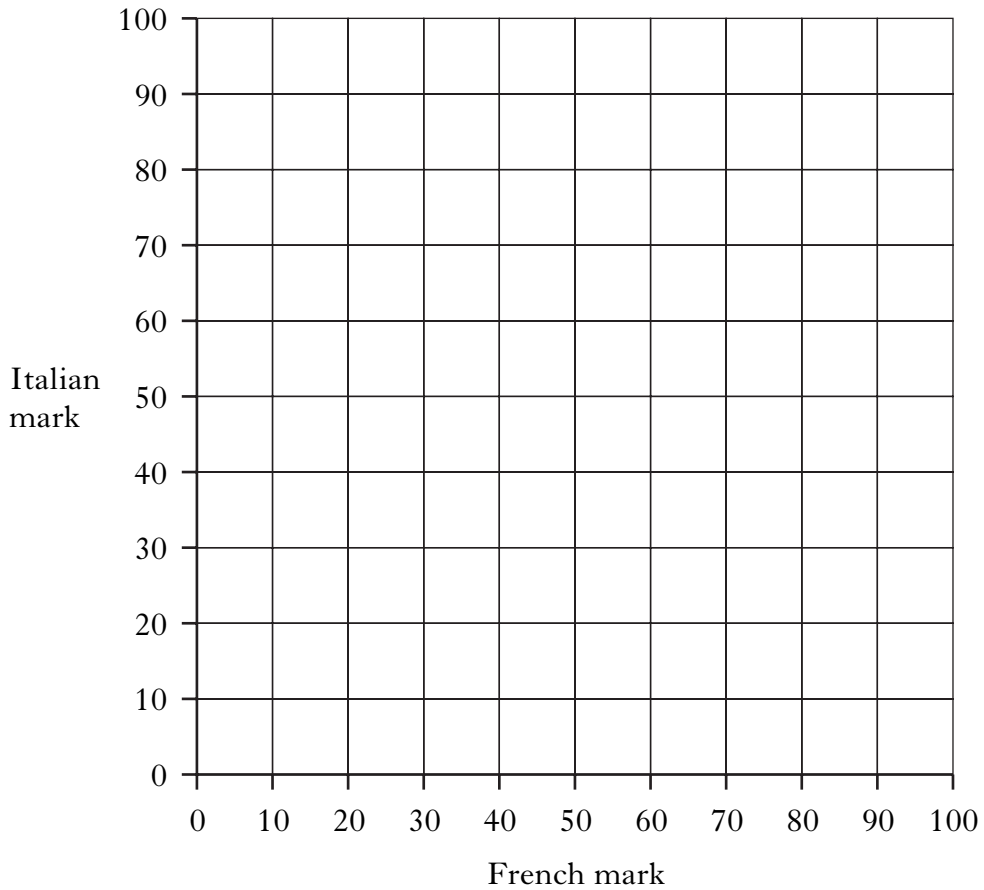
2. A particle is radioactive for 2.3×10^{-4} seconds.

Write this number in full.

7. The table below shows the marks scored by pupils in French and Italian exams.

Pupil	A	B	C	D	E	F	G	H
French Mark	15	23	50	38	40	42	70	82
Italian Mark	28	31	62	54	45	55	85	95

(a) Using these marks, draw a scattergraph.



(b) Draw a best-fitting line on the graph.

Marks

	KU	RE
2		
1		

Marks

	KU	RE
1		
3		

7. (continued)

(c) A pupil who scored 65 in his French exam was absent from the Italian exam.

Use your best-fitting line to estimate this pupil's Italian mark.

8. Pamela sees a bracelet costing £65 in a jeweller's window.

The jeweller offers Pamela a 5% discount.

Pamela decides to buy the bracelet.

How much does she pay?



Marks

KU	RE
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- 10.** There are 720 pupils in Laggan High School.
The ratio of boys to girls in the school is 5 : 4.
How many girls are in the school?

3	

[END OF QUESTION PAPER]

ADDITIONAL SPACE FOR ANSWERS