500/403			Total marks	KU	RE
ATIONAL JALIFICATIONS 07	THURSDAY, 3 MA 10.40 AM - 11.15				
	read what is printed belo				
Fill in these boxes and Fill in these boxes and Full name of centre	read what is printed belo	<b>w.</b> Towr	L		
Full name of centre	read what is printed belo				
	read what is printed belo	Towr			
Forename(s) Date of birth Day Month Year	Scottish candidate number	Towr			
Full name of centre Forename(s) Date of birth	Scottish candidate number	Towr	ame		
Full name of centre         Forename(s)         Date of birth         Day Month Year       S         1       You may not use a ca         2       Answer as many quest         3       Write your working an	Scottish candidate number Alculator. tions as you can. d answers in the spaces n-answer book for use if re	Towr	ame Iber of seat		
Full name of centre         Forename(s)         Date of birth         Day Month Year       S         I You may not use a case         A Answer as many quest         Write your working an the end of this question the number of the quest	Scottish candidate number Alculator. tions as you can. d answers in the spaces n-answer book for use if re	Towr	ame aber of seat Additional sp you use this	space, write c	



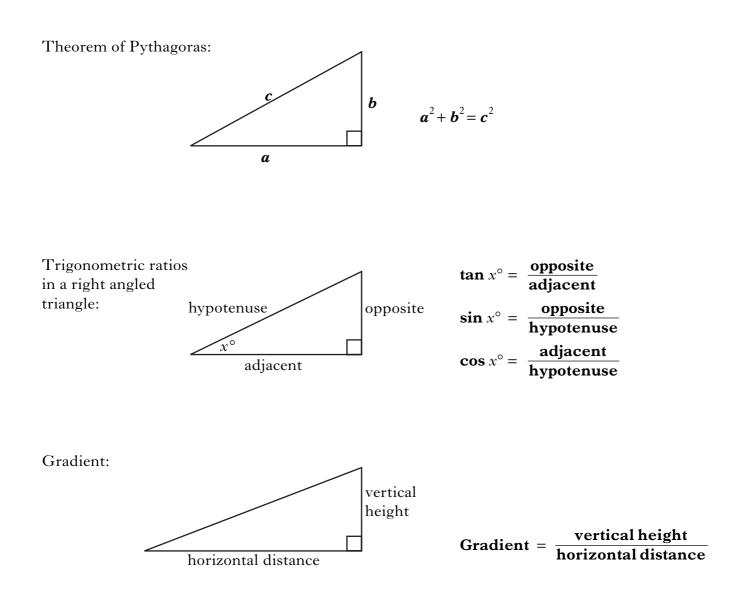
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QUALIFICATIONS AUTHORITY

### FORMULAE LIST

Circumference of a circle: $C = \pi d$ Area of a circle: $A = \pi r^2$ Curved surface area of a cylinder: $A = 2\pi rh$ Volume of a cylinder: $V = \pi r^2 h$ Volume of a triangular prism:V = Ah



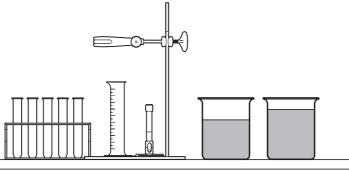
1.	Carry out the following calculations. (a) $4.27 - 1.832$	Marks	DO I WRIT TH MAR KU	NOT FE IN HIS RGIN RE
	(b) $6.53 \times 40$	1		
	( <i>c</i> ) 372 ÷ 8	1		
	( <i>d</i> ) $5 \times 4\frac{1}{3}$	1		
2.	A particle is radioactive for $2 \cdot 3 \times 10^{-4}$ seconds. Write this number in full.	2		

							DO I WRIT TH MAR	TE IN IIS
3. Zoe is a	a member of	a gym				Marks	KU	RE
		e following ex	ercise sessio	ne				
i ne gy	in oners the	ionowing ex		115.				
		Exercise	Session	Time				
	D R C	Veights Pance unning ycling wimming	15 mir 40 mir 20 mir 30 mir 45 mir	nutes nutes nutes				
She wa One po below. Comple	nts to exerci ossible comb	to show all	<b>mum of 90</b> ree different	<b>minutes</b> .	s shown in the table ns of three different			
Weights	Dance	Running	Cycling	Swimmin	ng Total Time (minutes)			
		1	$\checkmark$	1	95 minutes			
						3		
2500/403]			Page fou	r				

										WRIT TH MAR	NOT TE IN HIS RGIN
Complete tl	nis shape s	o that it h	as quarte	er-turn	symn	netr	y abo	out O.	Marks	KU	RE
			0								
									3		
								[Turn	over		

		WRI' TH	NOT FE IN HIS RGIN	
	Marks			
he temperature of two liquids. $s - 11^{\circ}$ Celsius. d is 23 $^{\circ}$ Celsius. mperatures.	Marks	KU	RE	
	2			
Page six			· I	

#### 5. In an experiment Rashid measures th



The temperature of the first liquid is The temperature of the second liquid Find the difference between these ter

											DO N WRIT TH MAR	FE IN HIS AGIN
6.	A c	nildren's play area is to be fenced.								Marks	KU	RE
	The	e fence is made in sections using le	engths	of w	ood, a	s sho	wn be	low.				
					1 se	ctior	1					
					2 see	ctior	15					
					3 se	ctior	ıs					
	( <i>a</i> )	Complete the table below.	T	1	T	Ι	Γ			1		
		Number of sections (s)	1	2	3	4	5		12			
		Number of lengths of wood ( <i>w</i> )	6	11						2		
		when you know the number of se	ctions	: (s).						2		
	( <i>c</i> )	A fence has been made from 81 le	engths	s of w	hood							
	(0)	How many sections are in this fer		, 01 , 1	004.							
		You must show your working.										
										2		
2500	0/40	3] P	age sev	ven			ſ	Turn	over			

Pu	pil	A	B	C	D	E	F	G	Н		
French	n Mark	15	23	50	38	40	42	70	82		
talian	Mark	28	31	62	54	45	55	85	95		
) Us	ing these	e mark	s draw a	scatter	oranh						
) 00			, araw c	l'ocuttor	grupin					2	
										2	
	100										
	90 -										
	80 -										
	70										
	60										
alian											
ark	50										
	40										
	30										
	20										
	10										
	0 + 0	10	20 30	) 40	50 6	<b>60 7</b> 0	80	90 10	0		
	0	10	20 50		nch mai		00	50 10	0		
) Dra	aw a bes	t-fittin	g line or	n the gra	aph.					1	

7.

						DO M WRIT TH MAR	TE IN IIS	
_					Marks	KU	RE	
7.	(co	ntinued)						
	( <i>c</i> )	A pupil who scored 65 in his Frenexam.	ich exam was ab	sent from the Italian				
		Use your best-fitting line to estimate	ate this pupil's I	talian mark.				
					1			
8.		hela sees a bracelet costing $\pounds 65$ in a		DW.				
		e jeweller offers Pamela a 5% discou	int.	John Stranger				
		nela decides to buy the bracelet. v much does she pay?		E J				
		inden does one pay		ġ				
				Q				
					3			
[250	0/40	νı	a nino					

Craig works in the school office. Shown below is his order for 25 boxes of folders. Office Supplies Blue Folders 7 boxes Green Folders 11 boxes Pink Folders 3 boxes Yellow Folders 4 boxes	Marks
Shown below is his order for 25 boxes of folders. Office Supplies Blue Folders 7 boxes Green Folders 11 boxes Pink Folders 3 boxes Yellow Folders 4 boxes	Marks
Shown below is his order for 25 boxes of folders. Office Supplies Blue Folders 7 boxes Green Folders 11 boxes Pink Folders 3 boxes Yellow Folders 4 boxes	
Office SuppliesBlue Folders7 boxesGreen Folders11 boxesPink Folders3 boxesYellow Folders4 boxes	
Blue Folders7 boxesGreen Folders11 boxesPink Folders3 boxesYellow Folders4 boxes	
Green Folders11 boxesPink Folders3 boxesYellow Folders4 boxes	
Totol 25 harran	
Total25 boxes	
<ul> <li>b) The first box Craig opens contains green folders.</li> <li>What is the probability that the next box he opens contains blu folders?</li> </ul>	<b>1</b> e
	2

			DO I WRIT TH	TE IN IIS
		Marks	MAR	
10.	There are 720 pupils in Laggan High School.	1110785	KU	RE
10.				
	The ratio of boys to girls in the school is 5 : 4.			
	How many girls are in the school?			
		3		
	[END OF QUESTION PAPER]			
[250	DO/4031 Paga alagram		I	I

# ADDITIONAL SPACE FOR ANSWERS

FOR OFFICIAL USE		 1		
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	KU	RE
Total marks		

# 2500/404

NATIONAL QUALIFICATIONS 2007 THURSDAY, 3 MAY 11.35 AM - 12.30 PM MATHEMATICS STANDARD GRADE General Level Paper 2

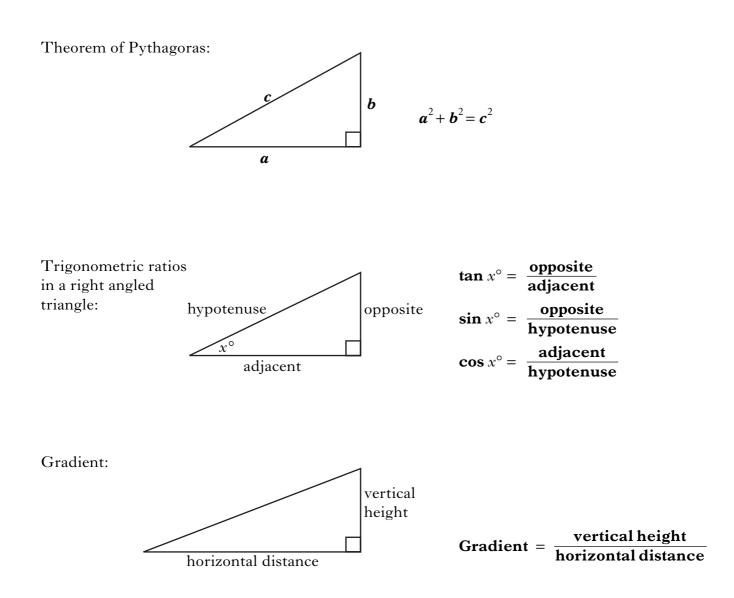
Fill in these boxes and read what is printed below.	
Full name of centre	Town
Forename(s)	Surname
Date of birth Day Month Year Scottish candidate number I You may use a calculator.	Number of seat
2 Answer as many questions as you can.	
3 Write your working and answers in the spaces pro- the end of this question-answer book for use if requi the number of the question involved.	
4 Full credit will be given only where the solution conta	ains appropriate working.
5 Before leaving the examination room you must give not you may lose all the marks for this paper.	e this book to the invigilator. If you do





### FORMULAE LIST

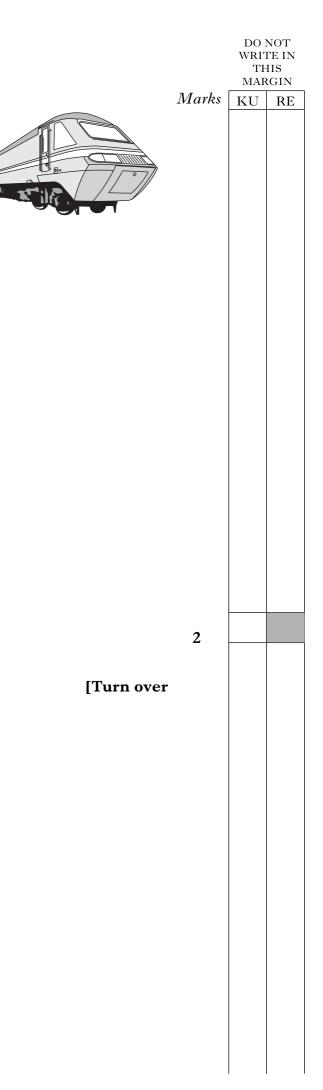
Circumference of a circle: $C = \pi d$ Area of a circle: $A = \pi r^2$ Curved surface area of a cylinder: $A = 2\pi rh$ Volume of a cylinder: $V = \pi r^2 h$ Volume of a triangular prism:V = Ah



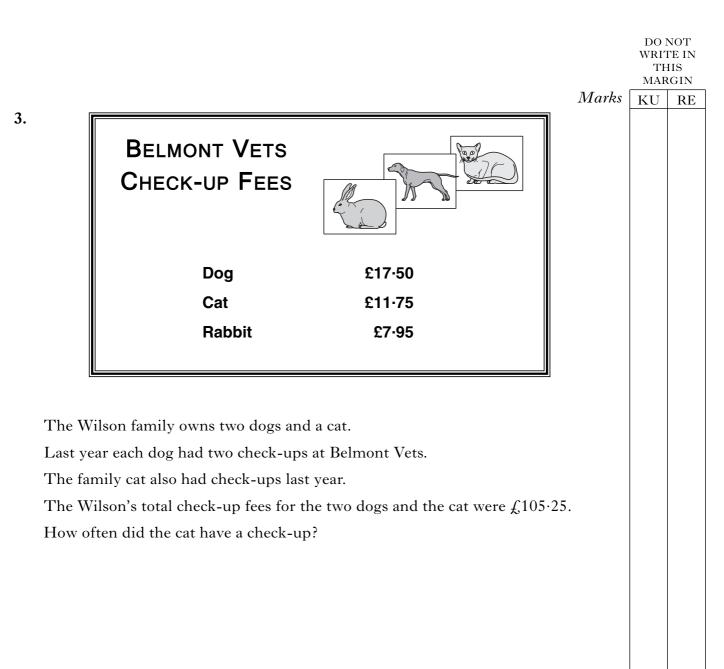
**1.** A Sprinter train travels at an average speed of 144 kilometres per hour.

The train takes 1 hour 15 minutes to travel between Dingwall and Aberdeen.

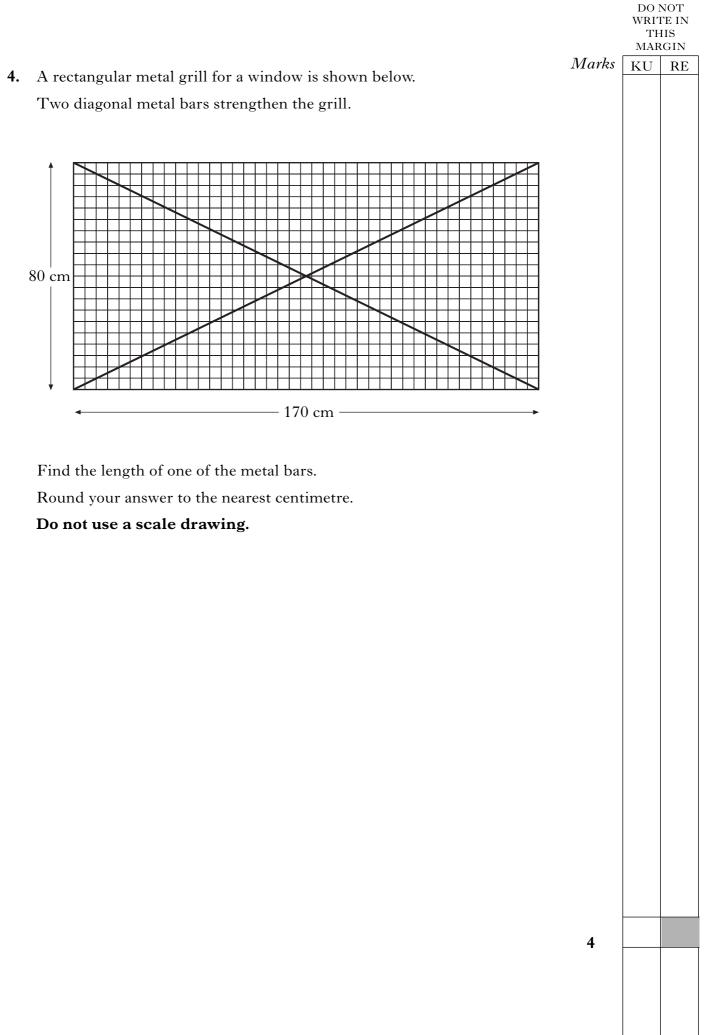
Calculate the distance between Dingwall and Aberdeen.



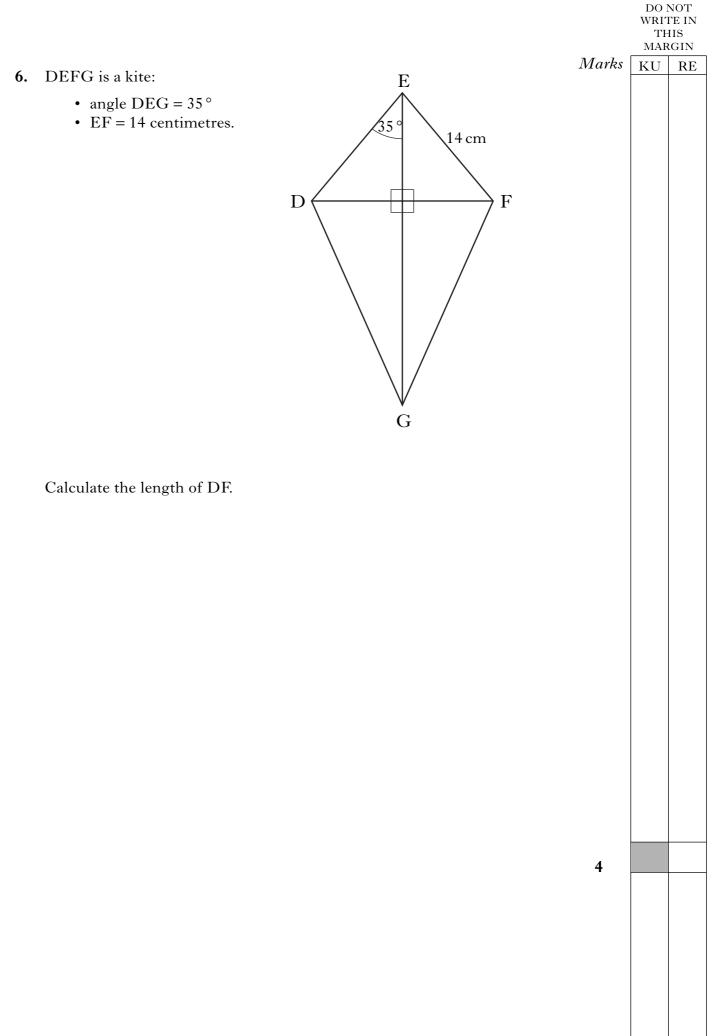
		Marks	DO I WRIT TH MAR	TE IN IIS	
2.	Mr McGill is a bricklayer.	11100000	<u>ixo</u>		
	He builds a wall using 7500 bricks:				
	<ul> <li>each brick costs 23 pence</li> <li>a charge of £200 is made for every 500 bricks he lays.</li> </ul>				
	What is the <b>total</b> cost of building the wall?				
		3			
		J			
[250	00/404] Page four				

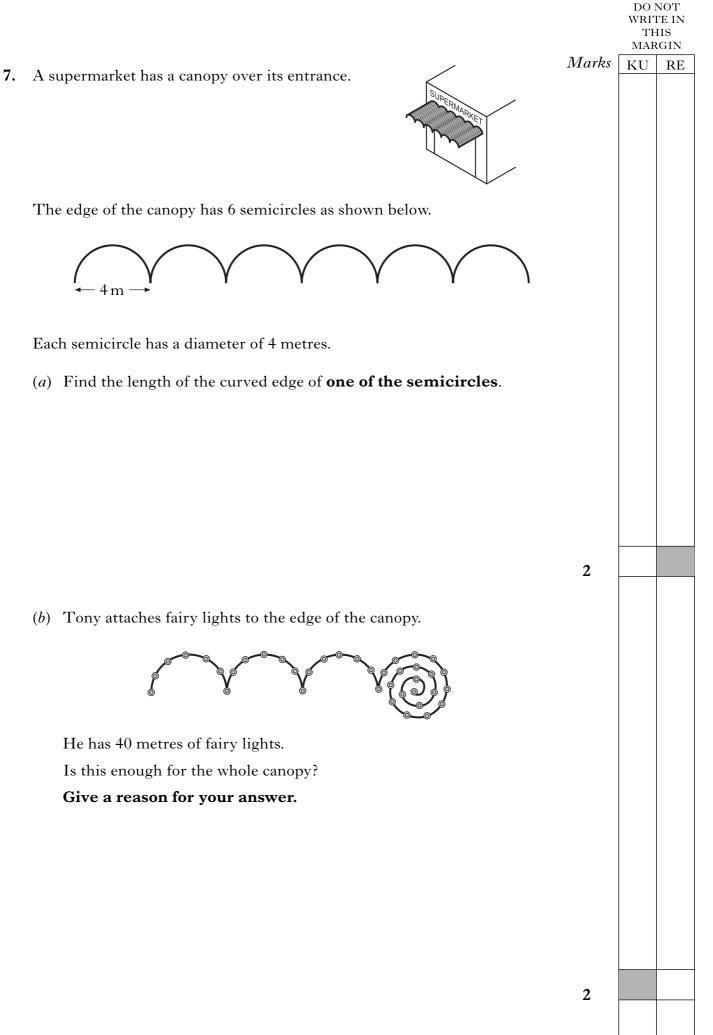


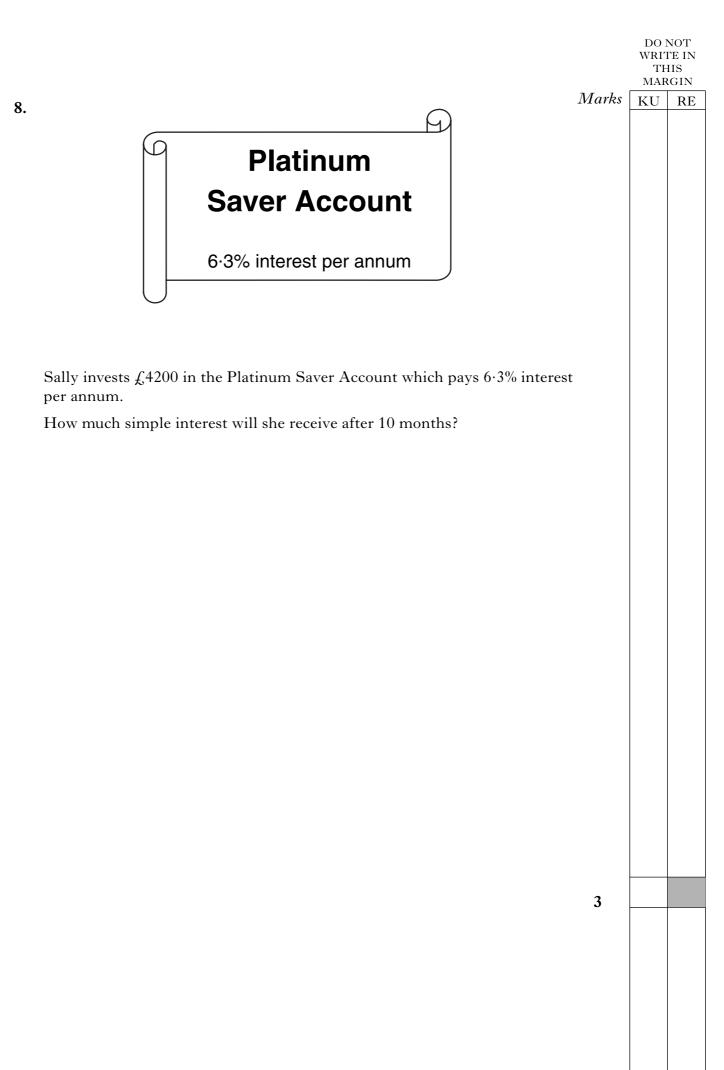
[Turn over



				WRIT TH	DO NOT RITE IN THIS ARGIN U RE	
<b>5.</b> ( <i>a</i> )	Simplify		Marks	KU		
	2(3x+7) + 4(3-x).					
			3			
(b)	Solve the inequality		U			
(b)	Solve the mequality					
	$4a-3 \ge 21.$					
			2			
		[Turn over				
[2500/404	4] Page so	even				



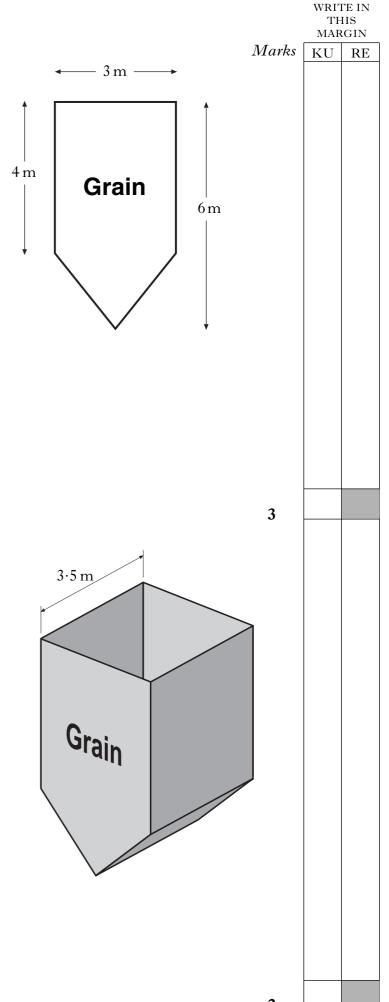




			WRI' TH	NOT TE IN HIS RGIN
T .1 1		Marks		
In the diagram: • O is the centre of • AC is a diameter • B is a point on th • angle BAC = $43^{\circ}$ Calculate the size of sha	e circumference	Marks	TH MAF	
		3		<u> </u>
00/404]	Page eleven	[Turn over	I	ı I

9.

- **10.** The end face of a grain hopper is shown in the diagram.
  - (*a*) Calculate the area of the end face.



DO NOT

(b) The grain hopper is in the shape of a prism with a length of 3.5 metres.Find the volume of the hopper.

		Marks	DO N WRIT TH MAR KU	'E IN IS
<b>11.</b> The diagram below shows the design for a	house window.	1110185	NU	
1.2  m $0.5  m$ $0.5  m$				
Find the value of <i>x</i> .				
		3		
[Turn over for	Question 12 on Page fourteen			
[2500/404] Page thi				

12.	The burning time, $t$ minutes, of a candle varies directly as its height, $h$ millimetres.	Marks	DO N WRI'I TH MAR KU	TE IN IIS
	A candle with a height of 75 millimetres burns for 180 minutes.			
	( <i>a</i> ) What is the burning time of a 40 millimetre candle?			
	<ul> <li>(b) A candle burns for 2<sup>1</sup>/<sub>2</sub> hours. What is the height of this candle?</li> </ul>	3		
	[END OF QUESTION PAPER]	3		
[250	0/404] Page fourteen			

# ADDITIONAL SPACE FOR ANSWERS

# ADDITIONAL SPACE FOR ANSWERS