

FOR OFFICIAL USE

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F

KU RE

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Total Marks

2500/401

NATIONAL
QUALIFICATIONS
2010

WEDNESDAY, 5 MAY
9.00 AM – 9.20 AM

MATHEMATICS
STANDARD GRADE
Foundation 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.



Marks

KU	RE
1	
1	
2	

1. Work out the answers to the following.

(a) $8325 + 647$

WORKING	
---------	--

--	--

ANSWER	
--------	--

1

(b) $\pounds 3.25 \times 6$

WORKING	
---------	--

--	--

ANSWER	£
--------	---

1

(c) 10% of 56

WORKING	
---------	--

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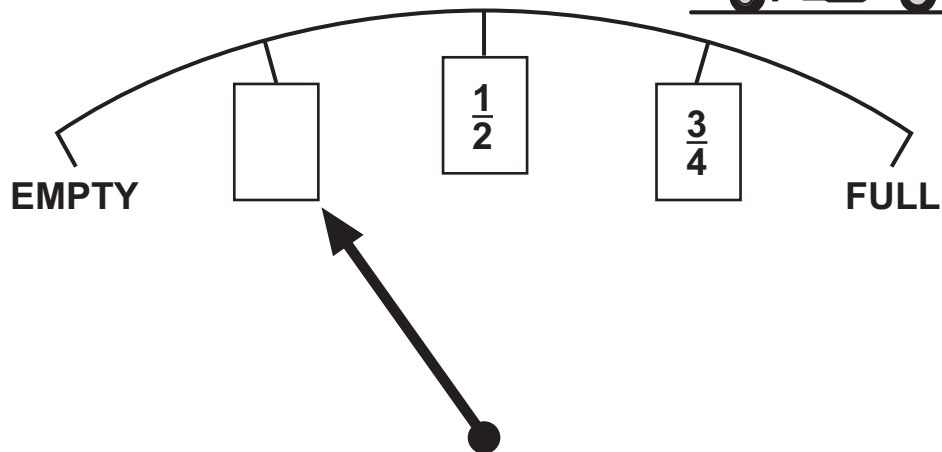
ANSWER	
--------	--

2

Marks

KU RE

2. John is a lorry driver.
He looks at this scale to see how much petrol is in the tank.



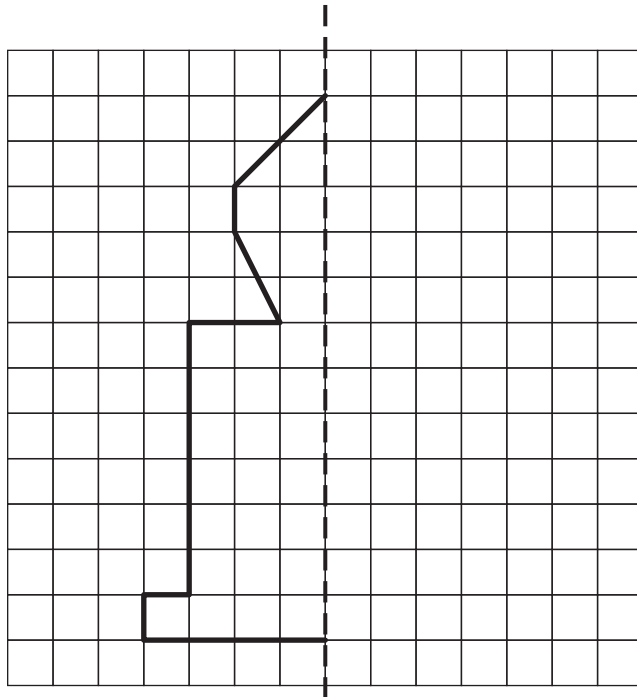
Write down the missing fraction.

ANSWER	
--------	--

1

KU	RE

3. The broken line is an axis of symmetry.
Complete the diagram.



4

Marks

KU	RE

4. A bottle holds 175 millilitres of cod liver oil.



Billie takes one 5 millilitre spoonful each day.

How many days will the bottle last?

WORKING	
ANSWER	days

ANSWER

days

2

KU	RE

5. In the Morse Code, letters are represented by patterns of dots and dashes. The word **TELEPHONE** is shown below in Morse Code.

Letter	Morse Code
T	= —
E	= ●
L	= ● — ● ●
E	= ●
P	= ● — — ●
H	= ● ● ● ●
O	= — — —
N	= — ●
E	= ●

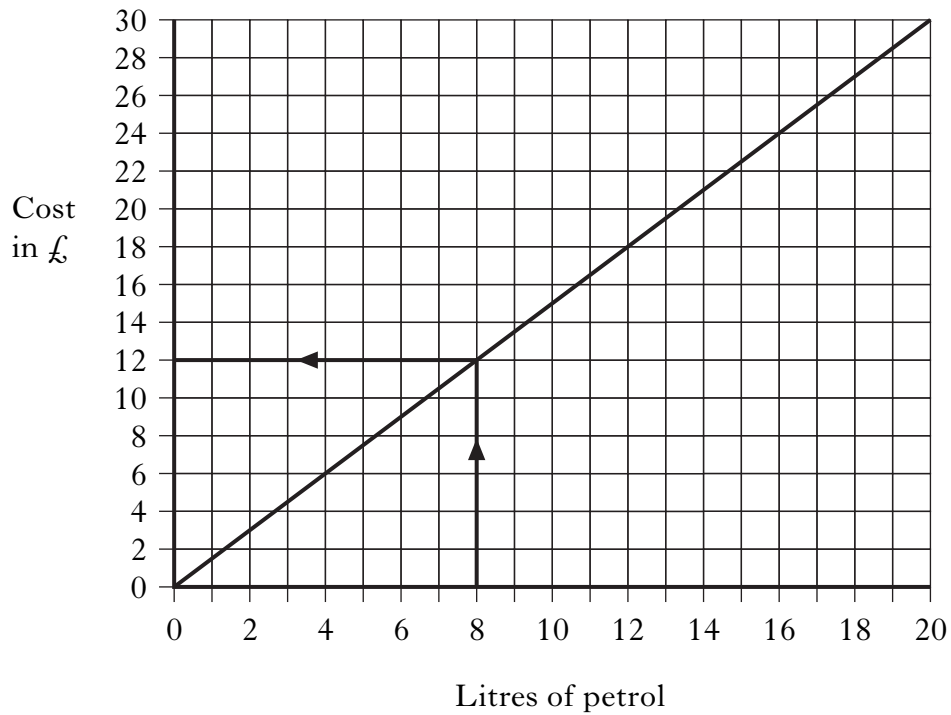
Show the word **PEN** in Morse Code.

ANSWER		Letter	Morse Code
	P	=	
	E	=	
	N	=	

3

	KU	RE
1		
3		

7. The line graph can be used to find the cost of buying petrol.



The graph shows that 8 litres of petrol cost £12.

- (a) A motorist paid £24 for petrol.
How many litres did he buy?

ANSWER		litres
--------	--	--------

1

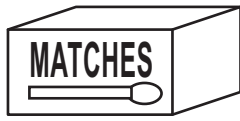
- (b) Find the cost of 36 litres of petrol.

WORKING		
ANSWER		£

3

KU	RE

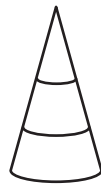
9. In the tie-breaker round of a competition, points are awarded for correctly naming the 3-dimensional shapes shown below.



1 point



2 points







3 points







4 points

A wrong answer is awarded 0 points.

Here are the answer sheets for Team A and Team B.

TEAM A		
Shape	Name	Points
	<i>cylinder</i>	0
	<i>cuboid</i>	
	<i>cone</i>	
	<i>sphere</i>	

TEAM B		
Shape	Name	Points
	<i>cuboid</i>	1
	<i>cylinder</i>	
	<i>cone</i>	
	<i>circle</i>	

9. (continued)

Marks

KU	RE

By completing the answer sheets, find out which team won the competition.

You must give a reason for your answer.

WORKING

ANSWER INCLUDING REASON

4

[END OF QUESTION PAPER]

ADDITIONAL SPACE FOR ANSWERS

FOR OFFICIAL USE

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F

KU RE

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Total Marks

2500/402

NATIONAL
QUALIFICATIONS
2010

WEDNESDAY, 5 MAY
9.40 AM – 10.20 AM

MATHEMATICS
STANDARD GRADE
Foundation 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

--	--	--	--	--	--	--	--	--	--

Number of seat

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Marks

KU	RE
3	

1. A joiner is paid a basic rate of £23.75 per hour.
He is paid double time when he works on a Sunday.
How much is he paid for working 8 hours on a Sunday?



WORKING

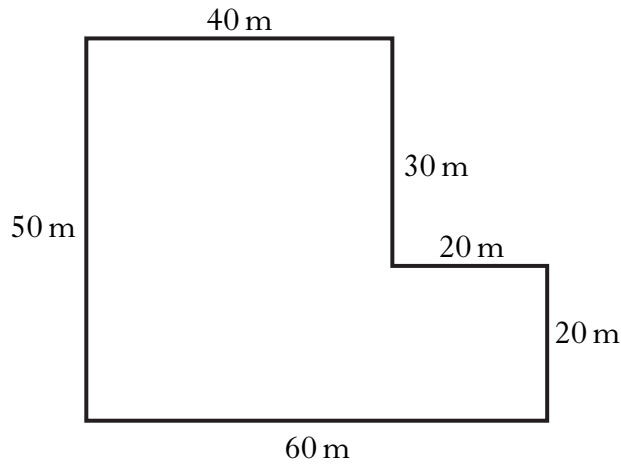
ANSWER

£

Marks

KU	RE

2. A fence is to be put around the perimeter of this field.



(a) What is the total length of fencing needed?

WORKING	
ANSWER	metres

2

(b) Fencing costs £2.50 per metre.
How much will the fence cost?

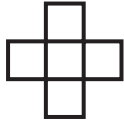
WORKING	
ANSWER	£

2

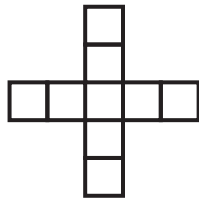
Marks

	KU	RE
4		
2		

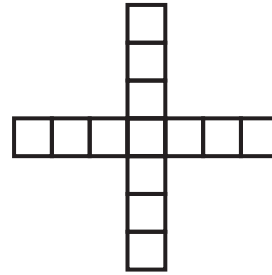
3. Anne is drawing crosses. Each cross is made up of squares as shown.



Cross number 1



Cross number 2



Cross number 3

(a) Complete this table.

Cross number	1	2	3	4	5	6		11
Number of squares	5	9						

WORKING

4

(b) Write down a rule for finding the number of squares if you know the cross number.

RULE

2

Marks

KU RE

4. The expenses for an Orienteering club outing are shown below.

Petrol for Minibus	£ 45.84
Lunches	£ 67.72
Maps	£ 27.50
Entry Fees to Course	£
Total Expenses	£ 222.81



Calculate the cost of the Entry Fees to the Course.

WORKING	
ANSWER	£

3

KU	RE

5. The timetables below show the times of the ferries between Ardrossan and Brodick.

Ardrossan	Brodick
<i>Depart</i>	<i>Arrive</i>
07 00	07 55
09 45	10 40
12 30	13 25
15 15	16 10
18 00	18 55

Brodick	Ardrossan
<i>Depart</i>	<i>Arrive</i>
08 20	09 15
11 05	12 00
13 50	14 45
16 40	17 35
19 20	20 15

(a) How long does the ferry take from Ardrossan to Brodick?

ANSWER	minutes
--------	---------

1

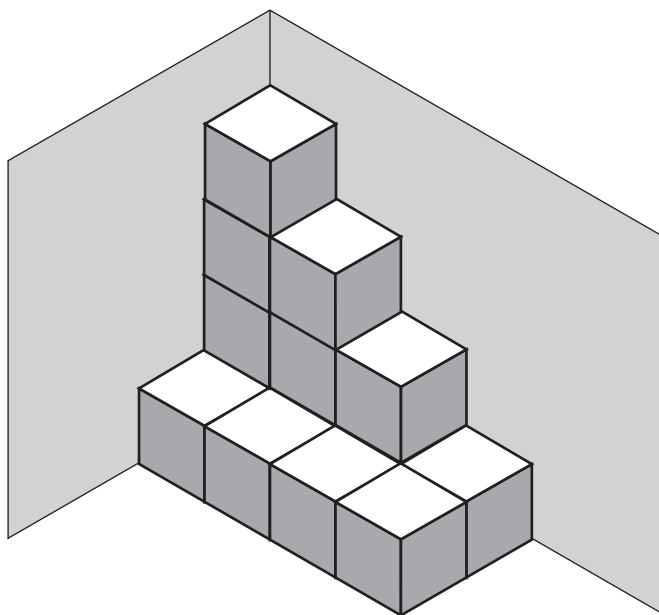
(b) One day Sophia took the first ferry from Ardrossan to Brodick and the last ferry back.

How long did Sophia spend in Brodick?

WORKING	
ANSWER	hours minutes

4

6. Cubes are stacked in a corner as shown below.



How many cubes are in the stack?

WORKING	
---------	--

ANSWER	
--------	--

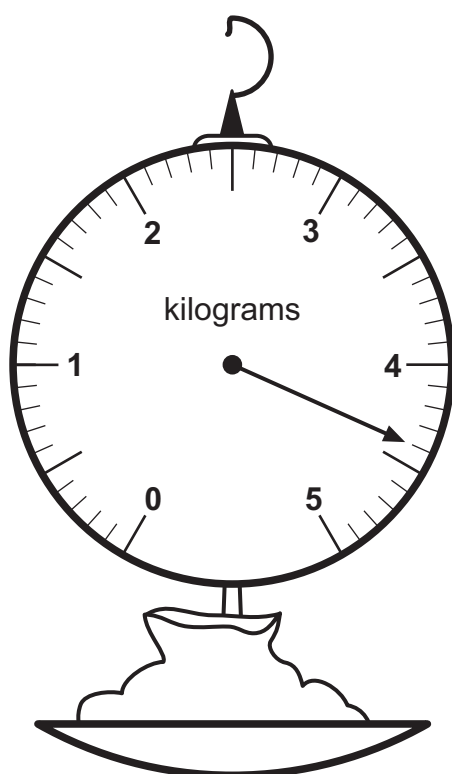
cubes

1

Marks

	KU	RE
1		
2		

7. (a) What weight is shown on this scale?



ANSWER		kilograms
--------	--	-----------

1

(b) What is this weight in grams?

WORKING

ANSWER		grams
--------	--	-------

2

Marks

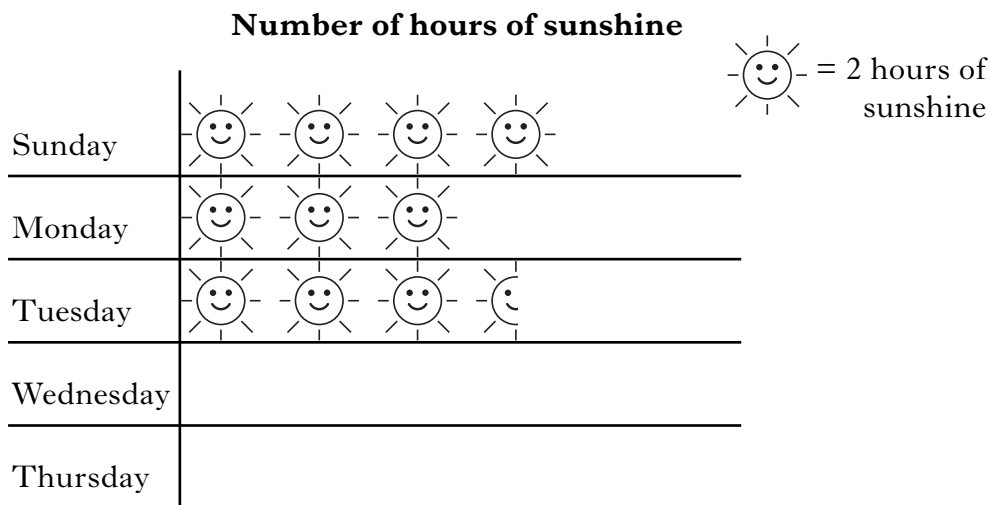
KU	RE

8. The number of hours of sunshine in a town is being recorded over a seven-day period.

The results for Sunday to Thursday are shown in the table below.

Day	Sunday	Monday	Tuesday	Wednesday	Thursday
Hours of sunshine	8	6	7	10	5

(a) Complete the pictograph below for Wednesday and Thursday.



2

(b) There was a total of 43 hours of sunshine in the week.

Friday had one less hour of sunshine than Saturday.

Complete the table for Friday and Saturday.

WORKING							
ANSWER							
Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hours of sunshine	8	6	7	10	5		

4

Marks

KU	RE

9. The amount of money spent by the Khan family each week for four different weeks is listed below.

£170 £122 £110 £130

Calculate the mean amount spent each week.

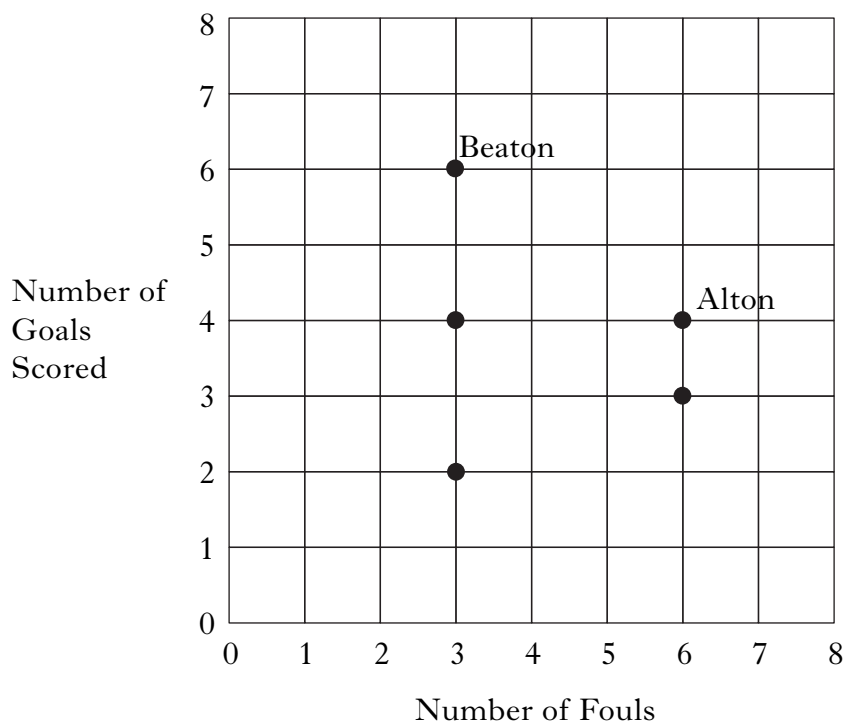
WORKING	
ANSWER	£

4

Marks

	KU	RE
1		
3		

10. Alex recorded the number of fouls and the number of goals scored by five local hockey teams one Saturday afternoon.



Alton had 6 fouls and scored 4 goals.

(a) How many goals were scored by Beaton?

ANSWER	_____ goals
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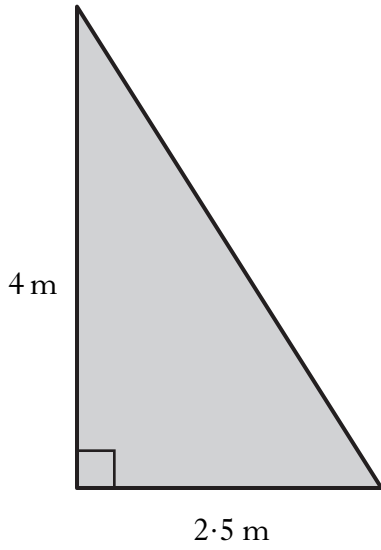
(b) Use the clues below to label each dot on the diagram with the correct team name.

- Daiton scored the same number of goals as Alton.
- Beaton scored twice as many goals as Exton.
- Chelton had the same number of fouls as Beaton.

WORKING	
---------	--

KU	RE

11. The sail on a boat is in the shape of a right angled triangle as shown below.



Find the area of the triangle.

WORKING

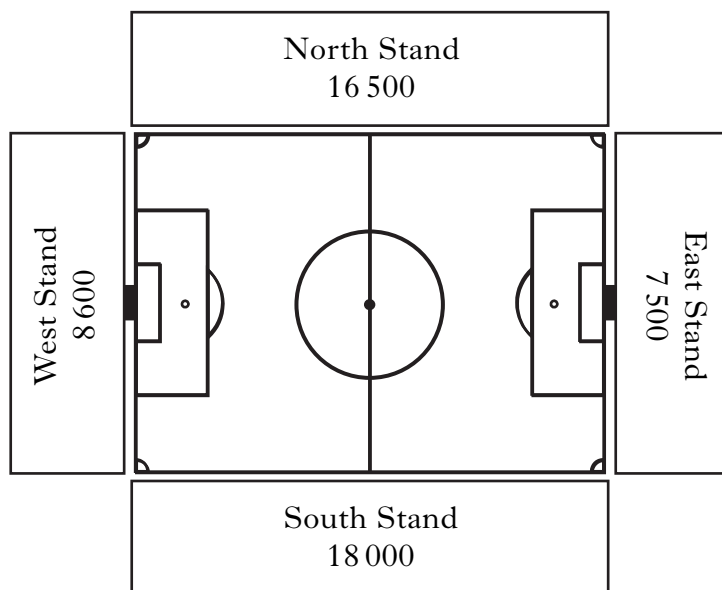
ANSWER

square metres

3

	KU	RE
2		
3		

12. The diagram below shows the number of spectators who can sit in each of the four stands at a Premiership football stadium.



- (a) How many spectators can sit in the stadium?

WORKING	
ANSWER	spectators

2

- (b) To allow more spectators to see the football matches, the South Stand will be enlarged.

The number of spectators allowed into the **South Stand** will be increased by 25%.

Find the **total** number of spectators the stadium will then hold.

WORKING	
ANSWER	spectators

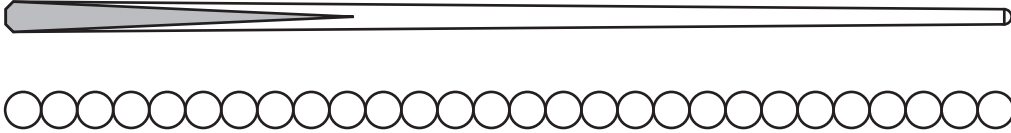
3

Marks

KU RE

13. Ronnie Higgins plays snooker at his club.

One day he placed 28 snooker balls beside his snooker cue as shown below. He noticed that they made a line **exactly** the same length as his snooker cue.



Ronnie knows that his cue is 145.6 centimetres long.

Calculate the **radius** of one snooker ball.

WORKING	
ANSWER	centimetres

3

KU	RE

14. The guidelines for cooking a **small** turkey are 45 minutes per kilogram plus a further 20 minutes.



This gives the formula for cooking a **small** turkey.

$$\text{Cooking time in minutes} = \text{weight in kilograms} \times 45 + 20$$

(a) Calculate the cooking time in minutes for a **small** turkey weighing 3 kilograms.

WORKING	
ANSWER	minutes

2

(b) The guidelines for cooking a **medium** turkey are 40 minutes per kilogram plus a further 25 minutes.

Complete the formula for cooking a **medium** turkey.

$$\text{Cooking time in minutes} =$$

2

ADDITIONAL SPACE FOR ANSWERS