F

KU | RE

Total Marks

2500/401

NATIONAL
QUALIFICATIONS
2006

FRIDAY, 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

Scottish candidate number

Number of seat

1 You may **NOT** use a calculator.

2 Answer as many questions as you can.

3 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.

4 Full credit will be given only where the solution contains appropriate working.

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SCOTTISH
QUALIFICATIONS
AUTHORITY

1. Work out the answers to the following.

(a) 2315 + 478

WORKING

ANSWER

1

(b) £4·17 × 5

WORKING

ANSWER £

1

(c) 50% of 164 metres

WORKING

ANSWER   metres

2

2. Gillian and David had a meal in a café.

This is their bill.

Chicken salad	£4·50
Fish and chips	£4·75
Water	£0·70
Tea	£0·85
TOTAL	£ ·

(*a*) Work out the total bill.

WORKING
ANSWER   £

1

(*b*) Walter also had a meal in the café.

This is his bill.

The corner has been torn off.

Salmon salad	
Ice cream and fruit	£1·75
Coffee	£0·90
TOTAL	£6·95

Work out the cost of the salmon salad.

WORKING
ANSWER   £

3

3. The pie chart below shows the attendance of a class one Monday.

Class Attendance

Key

⬚ Absent

⬚ Present
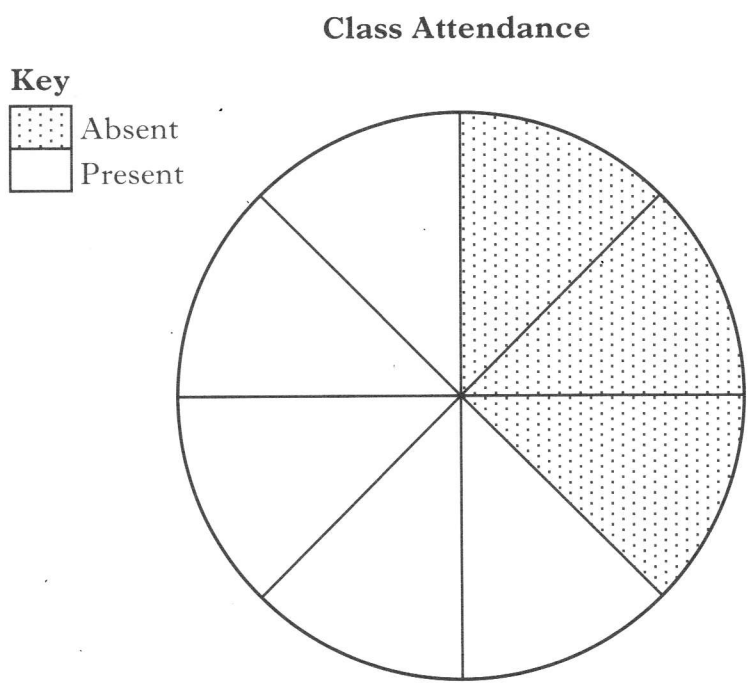
(*a*) What fraction of the class is absent?

ANSWER	

1

(*b*) There are 32 pupils on the class register.
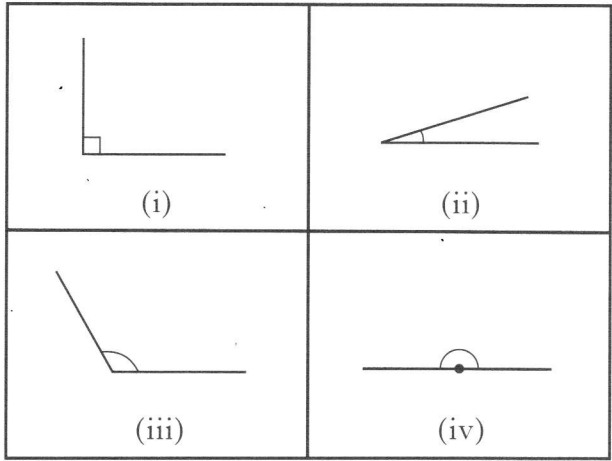
How many pupils are absent?

WORKING

ANSWER		pupils

3

4. (*a*) There are four angles shown in the boxes below.

(i)   (ii)

(iii)   (iv)

Which one is an acute angle?

| ANSWER | The acute angle is in box (   ). |

1

(*b*) Use a protractor to measure the angle below.

| ANSWER | ° |

1
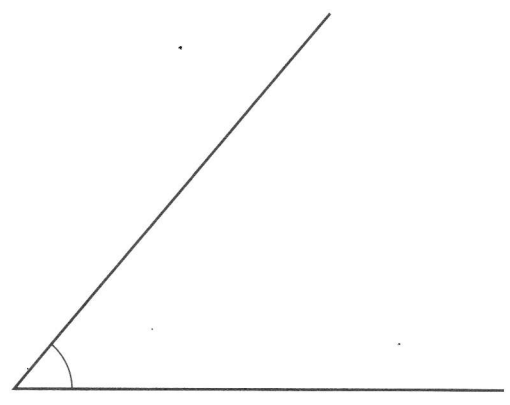
5. Brian and his brother go to the local park.

SAFETY NOTICE
Total weight on seesaw must not be greater than 105 kg

Brian weighs 48 kilograms and his brother weighs 54 kilograms.

Can Brian and his brother play safely together on the seesaw?

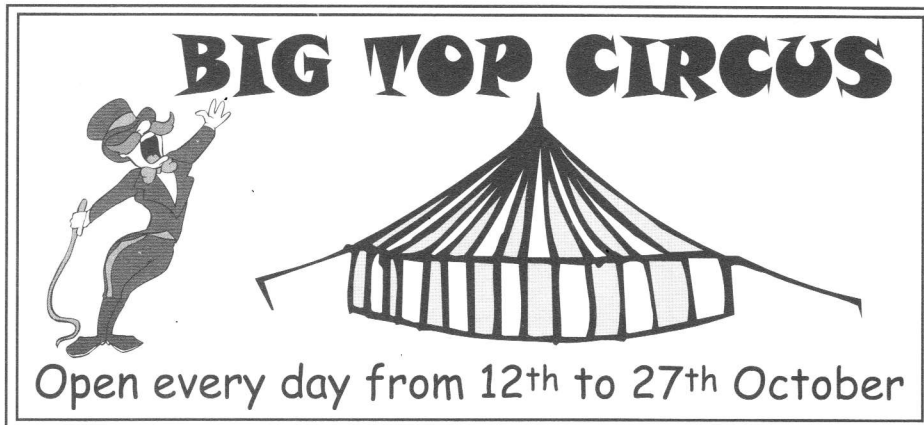You must give a reason for your answer.

WORKING

ANSWER INCLUDING REASON

2

6. The circus is coming to town.

BIG TOP CIRCUS

Open every day from 12th to 27th October

(a) For how many days is the circus open?

WORKING	
ANSWER	days

2

(b) The circus is so popular that it stays in town for a further 10 days. On what date will the circus now finish?

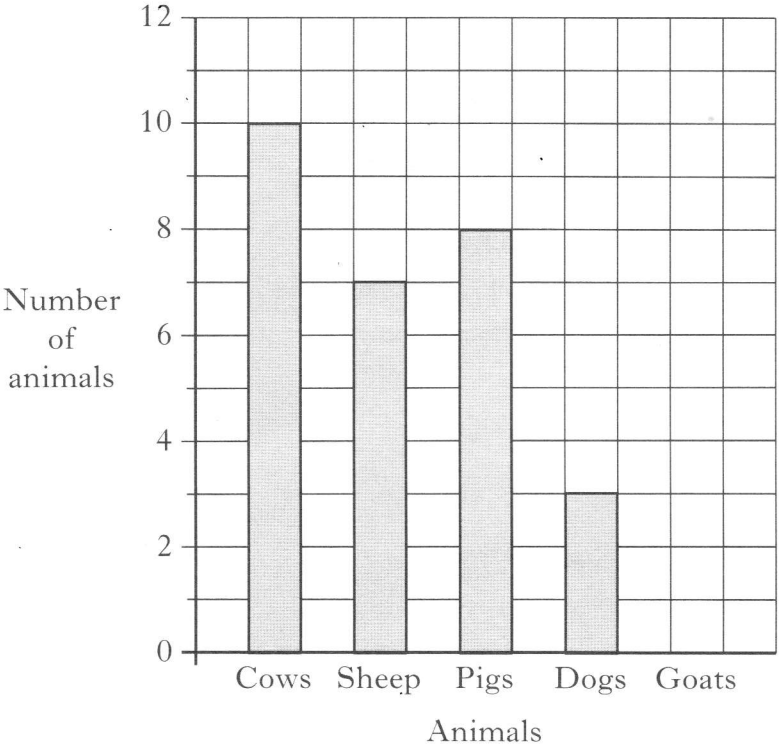| WORKING	
ANSWER	Finish Date

2

7. Farmer Jack Shearer is drawing a graph to show how many animals he has on his small farm.

Part of the graph is shown below.

(a) How many sheep are there on the farm?

| ANSWER | | sheep |

1

(b) The **total** number of animals on the farm is 34.

Complete the graph to show the number of goats.

WORKING

3

F

2500/402

NATIONAL
QUALIFICATIONS
2006

FRIDAY, 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.

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Town

Forename(s)

Surname

Date of birth
Day Month Year   Scottish candidate number   Number of seat

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SCOTTISH
QUALIFICATIONS
AUTHORITY

1. Mr and Mrs Smith and their two children, aged 14 and 10, are planning a ski holiday.

   This table shows the prices.

	Cost per person
Adult	£950
Child : over 12	£625
Child : 12 or under	£375

   Work out the total cost of their holiday.

WORKING	
ANSWER	£

3

2. The broken line is an axis of symmetry.

Complete the diagram.

4
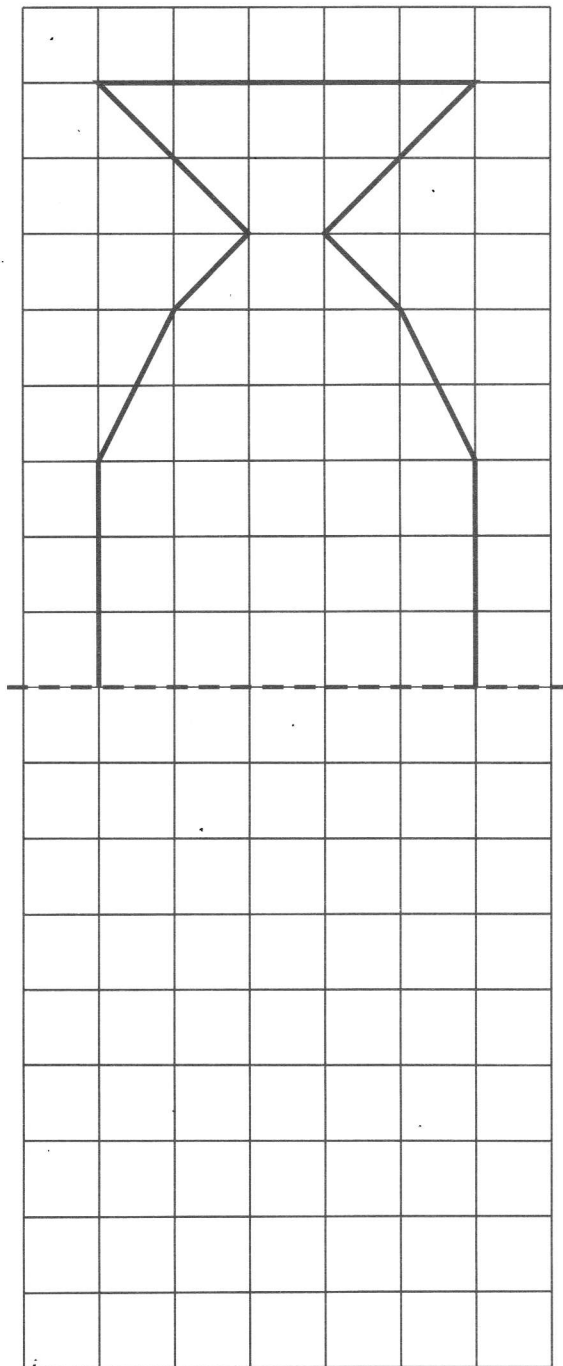
3. Ian belongs to a running club.

(a) One evening he starts running at 1830 hours and finishes at 2100 hours.

For how long did Ian run?

WORKING

ANSWER | hours   minutes | 1

(b) He runs at an average speed of 6 miles per hour.
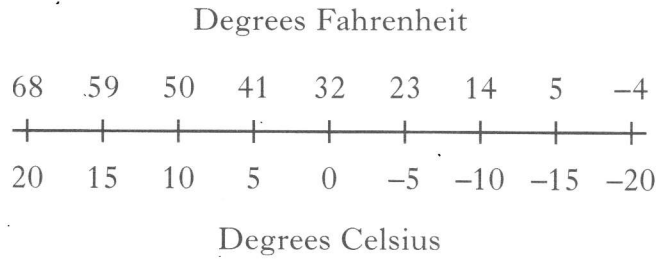
What distance did Ian run?

WORKING

ANSWER | miles | 2

4. The scale below shows temperatures in both degrees Fahrenheit and degrees Celsius.

Degrees Fahrenheit

| 68 | 59 | 50 | 41 | 32 | 23 | 14 | 5 | −4 |

| 20 | 15 | 10 | 5 | 0 | −5 | −10 | −15 | −20 |

Degrees Celsius

(a) Use the scale to change 5° Fahrenheit into degrees Celsius.

| ANSWER | ° Celsius |

1

(b) The temperature falls from 10° Celsius to −5° Celsius.

Work out by how many degrees **Fahrenheit** the temperature falls.

WORKING

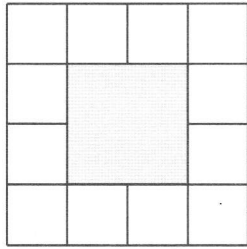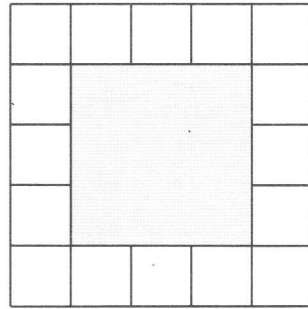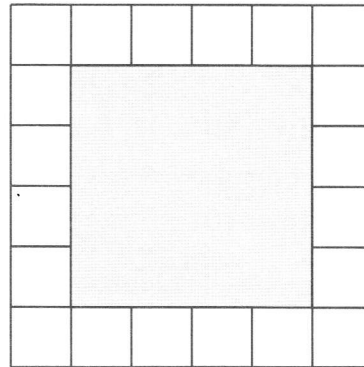| ANSWER | ° Fahrenheit |

3

5. A picture frame company makes square frames in different sizes.

Each frame has tiles round the edge as shown.

| Size 1 | Size 2 | Size 3 |

(*a*)   Complete this table.

Size number	1	2	3	4	5	6		10
Number of tiles	12	16						

WORKING

4

(*b*)   Write down a rule for finding the number of tiles if you know the size number.

RULE

2

6. Brad has 10 goldfish.

The weight, in grams, of each goldfish is listed below.

58 64 66 67 70 73 73 74 83 92

(a) Write down the mode.

ANSWER		grams

1

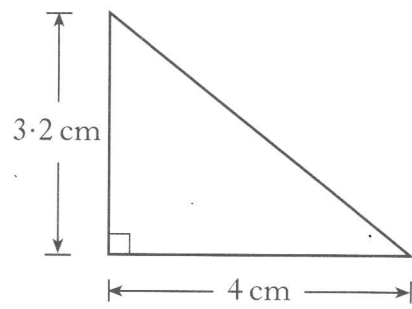(b) Calculate the mean weight of a goldfish.

WORKING

ANSWER		grams

4

7. Calculate the area of the triangle shown below.

WORKING

| ANSWER | | square centimetres |

3

8. A bottle of wine contains 750 millilitres.

(*a*) Six glasses can be filled from one bottle of wine.

How much wine does each glass contain?

WORKING

ANSWER _____ millilitres

2

(*b*) A catering company is organising a dinner party for 12 people.

Each person will be served with 2 glasses of wine.

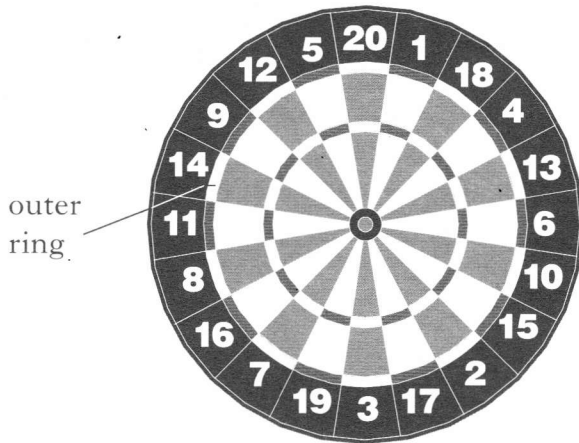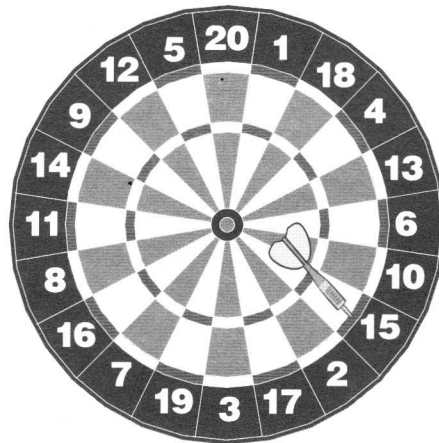How many bottles of the wine will be needed?

WORKING

ANSWER _____ bottles

2

9. The diagram below shows a dartboard.

When a dart lands in the outer ring, you score **double** points.

outer
ring

For example, the dart shown below has landed in **double 15**, giving a score of **30** points.

9. **(continued)**

Irene is playing a game of darts.

To win the game using her last **2 darts**, Irene needs to

- score a total of **19** points
- throw a **double** with her second dart.

The table below shows two ways that Irene can win.

First dart	Second dart	Total
1	double 9	19
7	double 6	19
	double	19
	double	19
	double	19
	double	19
	double	19

$1 + 18 = 19$

$7 + 12 = 19$

Complete the table to show five other ways that Irene can win.

3

WORKING

10. A shop offers students a 15% discount off all marked prices.

STUDENT DISCOUNT

15% off all marked prices

£360

How much would a student pay for a washing machine with a marked price of £360?

WORKING

ANSWER £

4

11. Anne wants to buy a DVD recorder.

She sees the one she wants in two different shops.

Electrical Direct	Roberts and Sons
Pay a deposit of £70 and then 24 monthly payments of £15·25	Special Offer £399·99

(a) How much would it cost to buy the DVD recorder in Electrical Direct?

WORKING

ANSWER £

(b) Anne decides to buy the DVD recorder in Roberts and Sons.
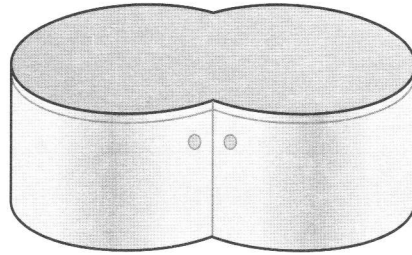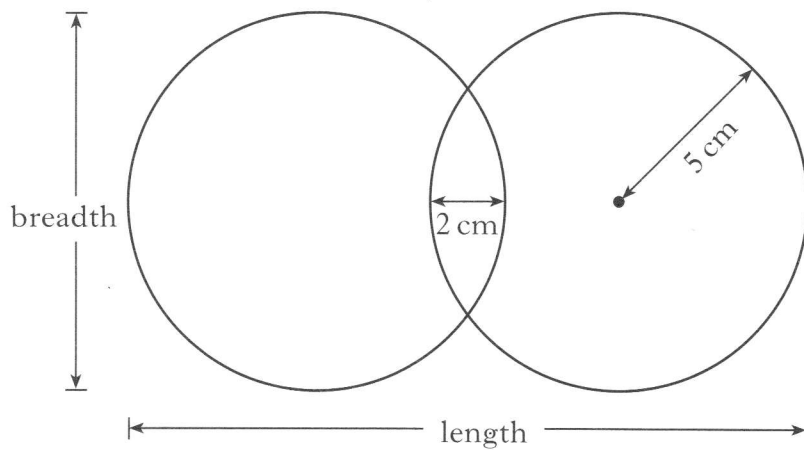
How much does she save by buying it in this shop?

WORKING

ANSWER £

12.

The top of a jewellery box is in the shape of two equal overlapping circles. A sketch of the top of the box is shown below.

breadth

2 cm

5 cm

length

The radius of each circle is 5 centimetres.

The two circles overlap by 2 centimetres.

(a)   Calculate the breadth of the jewellery box.

WORKING

ANSWER _____ centimetres

1

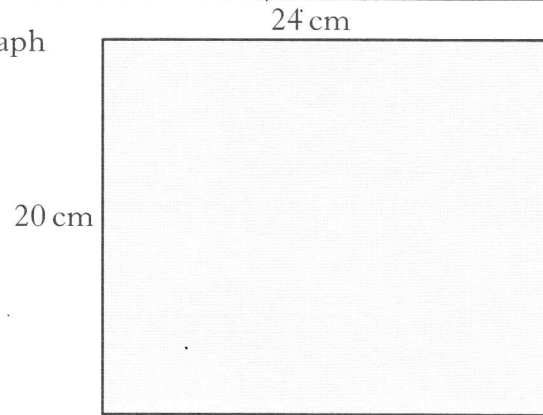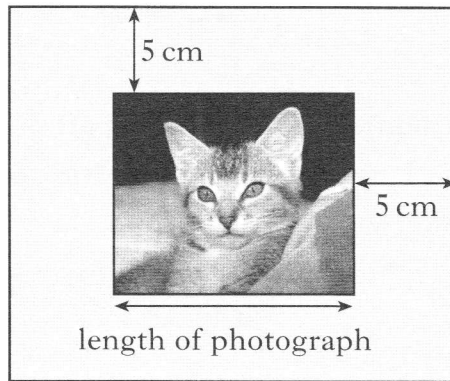(b)   Calculate the length of the jewellery box.

WORKING

ANSWER _____ centimetres

3

13. Angela is going to place a photograph on this card.

24 cm

20 cm

She places it on the card so that there is a border of 5 centimetres all the way round.

5 cm

5 cm

length of photograph

(a) Find the length of the photograph.

WORKING

ANSWER _____ centimetres   **1**

(b) Find the **perimeter** of the photograph.
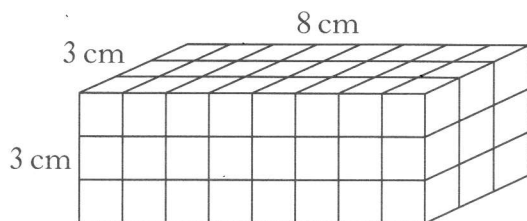
WORKING
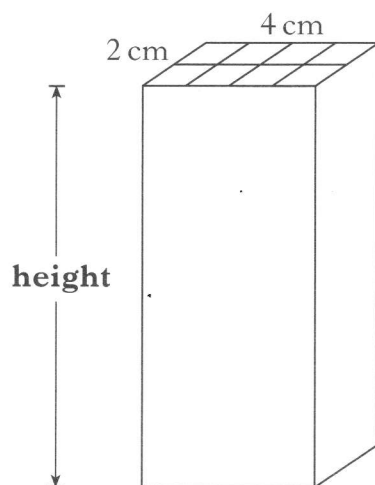
ANSWER _____ centimetres   **3**

14. Bilal has a set of building cubes of side 1 centimetre.

1 cm

He builds a cuboid 8 centimetres long, 3 centimetres broad and 3 centimetres high using **all** the cubes in the set.

3 cm 8 cm 3 cm

Bilal then builds a different cuboid using **all** the cubes in the set.

It is 4 centimetres long and 2 centimetres broad, as shown below.

2 cm 4 cm **height**

What is the height of this cuboid?

WORKING	
ANSWER	centimetres

4

[END OF QUESTION PAPER]