Surname	Centre Number	Candidate Number
Other Names		0

GCSE

4352/01

MATHEMATICS (UNITISED SCHEME)

UNIT 2: Non-Calculator Mathematics
FOUNDATION TIER

P.M. THURSDAY, 8 November 2012

$1\frac{1}{4}$ hours

CALCULATORS ARE NOT TO BE USED FOR THIS PAPER

4352 010001

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** the questions in the spaces provided.

Take π as 3·14.

INFORMATION FOR CANDIDATES

You should give details of your method of solution when appropriate.

Unless stated, diagrams are not drawn to scale.

Scale drawing solutions will not be acceptable where you are asked to calculate.

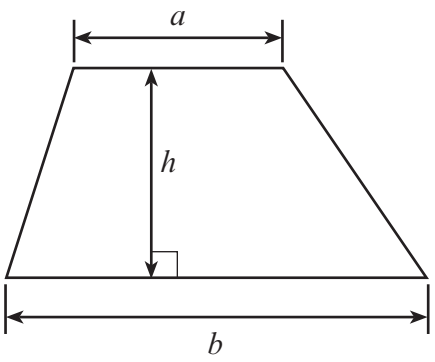
The number of marks is given in brackets at the end of each question or part-question.

You are reminded that assessment will take into account the quality of written communication (including mathematical communication) used in your answer to question **9**.

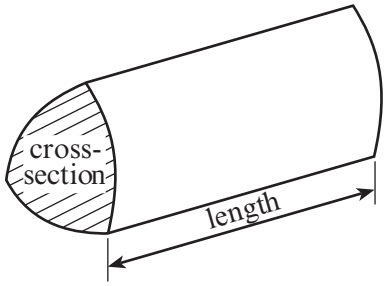
For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1	**10**	
2	**4**	
3	**4**	
4	**8**	
5	**3**	
6	**4**	
7	**4**	
8	**5**	
9	**6**	
10	**5**	
11	**6**	
12	**6**	
TOTAL MARK		

Formula List

Area of trapezium = $\frac{1}{2}(a + b)h$



Volume of prism = area of cross-section × length



Examiner only

1. *(a)* (i) Write down, in figures, the number thirty four thousand, two hundred and five.

.....

[1]

(ii) Write down, in words, the number 3 000 000.

.....

[1]

(b) Using only the numbers in the following list,

37 26 53 45 43 48 55

write down

(i) two numbers that have a sum of 80,

.....

[1]

(ii) the number which must be subtracted from 92 to give 47,

.....

[1]

(iii) the number which has 6 as a factor.

.....

[1]

(c) Write 2647

(i) correct to the nearest 10,

.....

[1]

(ii) correct to the nearest 1000.

.....

[1]

(d) Using only numbers between 30 and 39 inclusive, write down

(i) a number which is a multiple of 7,

.....

[1]

(ii) a square number,

.....

[1]

(iii) a prime number.

.....

[1]

Examiner only

2. Write down the metric unit that is best used to measure

the distance from Berlin to Paris, ...

the weight of a mobile phone, ...

the height of a house, ...

the capacity of a cup. .....

[4]

3. In each part of this question, one card is chosen at random from a set of five cards.
In each part, write numbers on the five cards to make each of the following statements true.

(a) It is certain that the chosen card will be a 6.

[1]

(b) It is likely that the chosen card will be a 6.

[1]

(c) It is impossible for the chosen card to be a 6.

[1]

(d) The chance of getting a 5 on the chosen card is the same as the chance of getting a 6.

[1]

Examiner only

4. *(a)* Describe **in words** the rule for continuing **each** of the following sequences.

(i) 72, 65, 58, 51, ...

Rule: .....

.....

[1]

(ii) 64, 16, 4, 1, ...

Rule: .....

.....

[1]

(b) Write 4% as a decimal.

.....

[1]

(c) Find 30% of 80.

.....

.....

.....

[2]

(d) David has a number of tins.
When he puts them on trays, each holding 24 tins, he has no tins left over.
When he puts them on trays, each holding 20 tins, he has 12 tins left over.
What is the least number of tins that David could have?

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.....

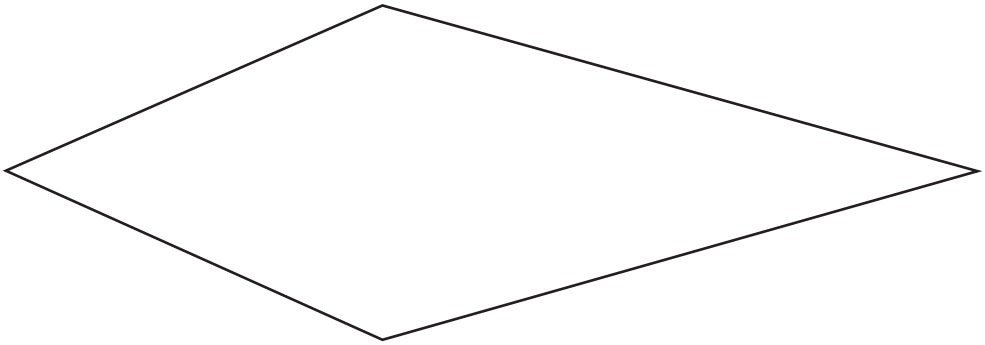
[3]

Turn over.

Examiner only

5. *(a)* Write down the special name of the following quadrilateral.

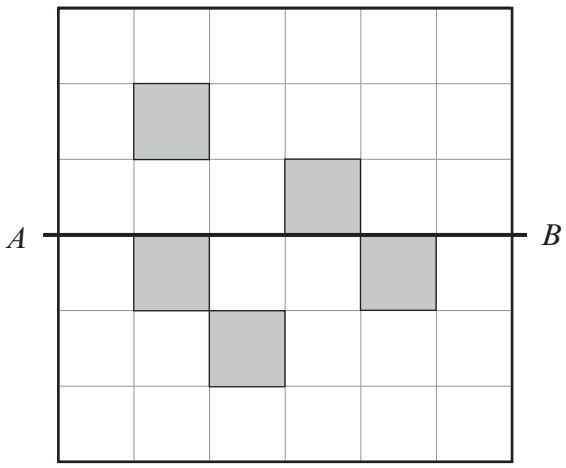
[1]



Name of quadrilateral .....

(b) Shade in as few squares as possible so that the pattern is symmetrical about AB.

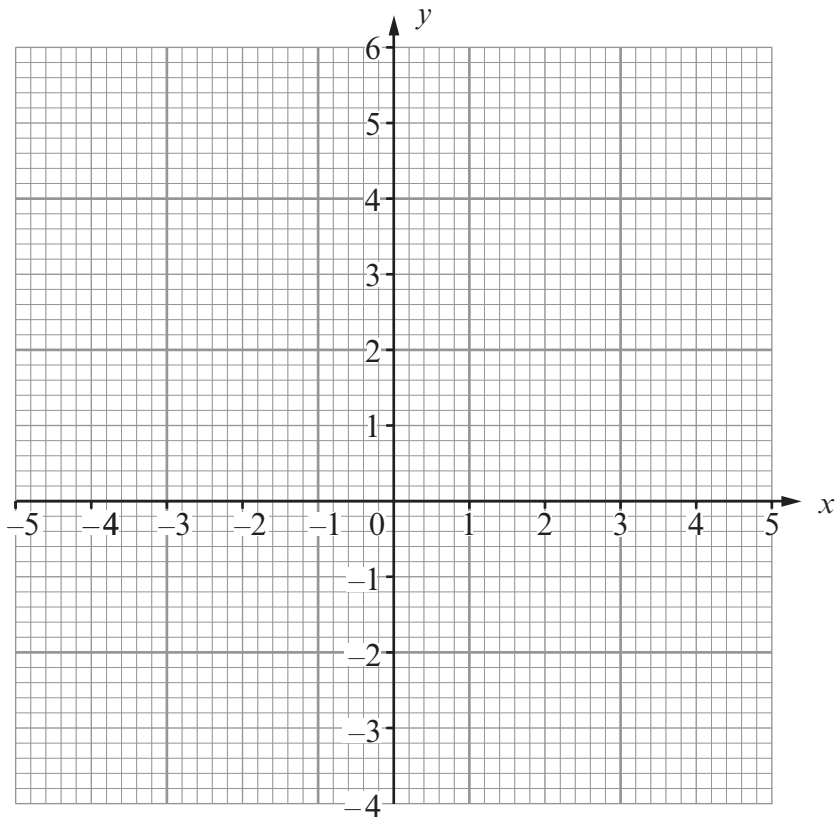
[2]



Examiner only

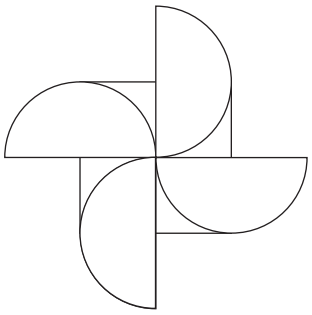
6. *(a)* On the graph paper below, plot and label the points $A(3, -2)$ and $B(-4, -3)$.

[2]

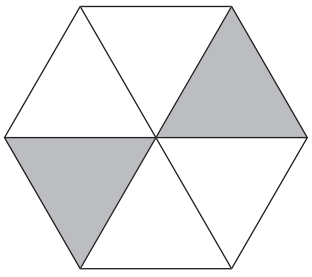


(b) Write down the order of rotational symmetry for each of the following.

[2]



Order of rotational symmetry = ...



Order of rotational symmetry = ...

Examiner only

7. *(a)* Simon rents a car for a total of £450.
The rental charges are £150 for the first day and £75 per day after that.
For how many days did Simon rent the car?

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[3]

(b) Simon was charged 20% VAT on the rental.
How much more money did Simon have to pay?

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.....

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[1]

Examiner only

8. *(a)* Simplify $8a + 6b + a - 4b$.

.....

.....

[2]

(b) Solve $\frac{x}{5} = 20$.

.....

.....

[1]

(c) Write down the next 2 terms in the sequence

17, 16, 13, 8, ..., ...

.....

.....

[2]

Turn over.

Examiner only

9. *You will be assessed on the quality of your written communication in this question.*

Julie buys 3 kg of apples and 5 kg of pears for £13.80.
The pears cost £1.80 per kilogram.
What is the price per kilogram of the apples?

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[6]

Examiner only

10. Five children each threw the same dice 12 times.
They recorded how many sixes they each threw with this dice.
The results are shown below.

Name	Abbi	Sasha	Meinir	Samad	Jenny
Number of sixes	5	3	2	4	6

(a) Use Abbi's result to estimate the probability of **not** throwing a six on any single throw of the dice.

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.....

[2]

(b) Do you think the dice thrown was fair or biased?
You must show your working and give a reason for your answer.

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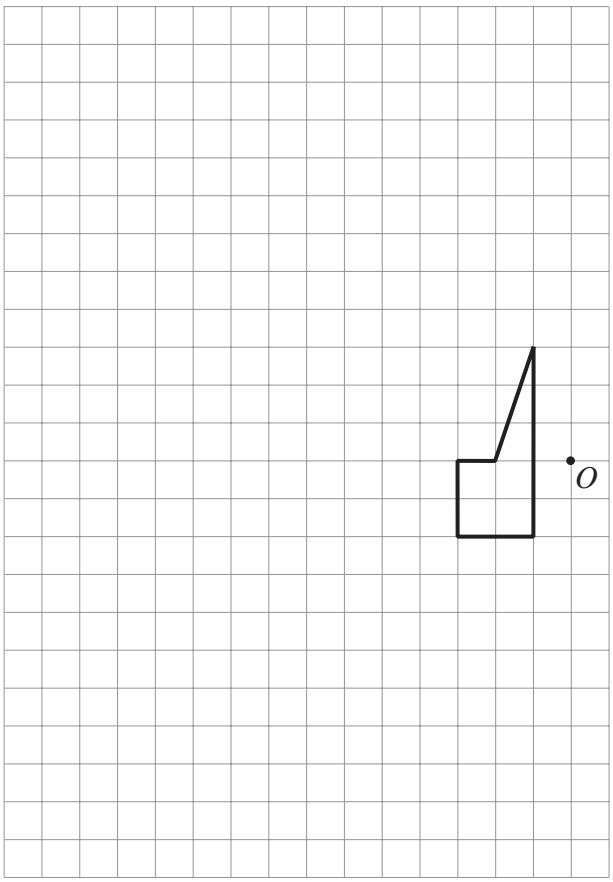
[3]

Examiner only

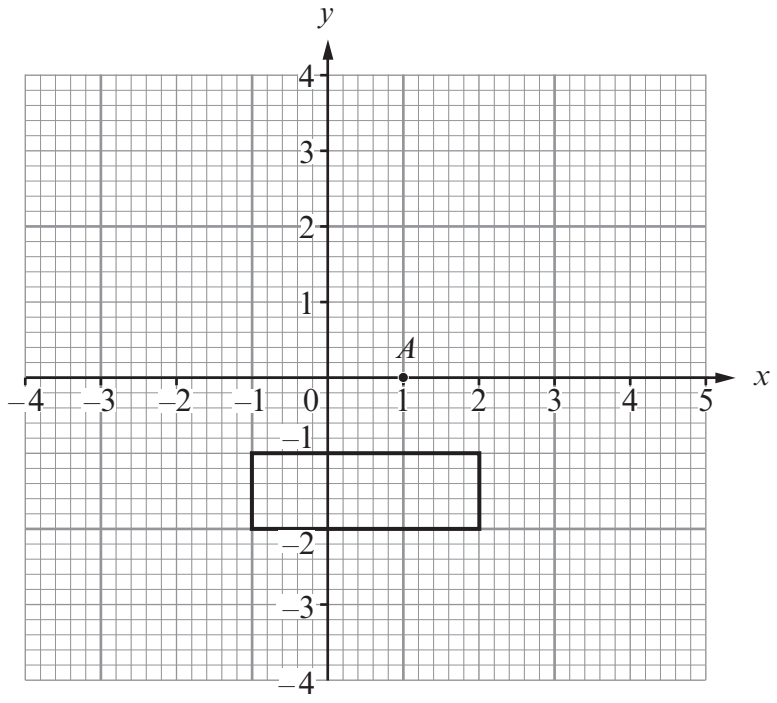
11. *(a)* On the grid below, draw the enlargement of the given shape using a scale factor of 3 and centre *O*.

[3]



(b) Rotate the rectangle through 180° about the point *A*(1, 0).

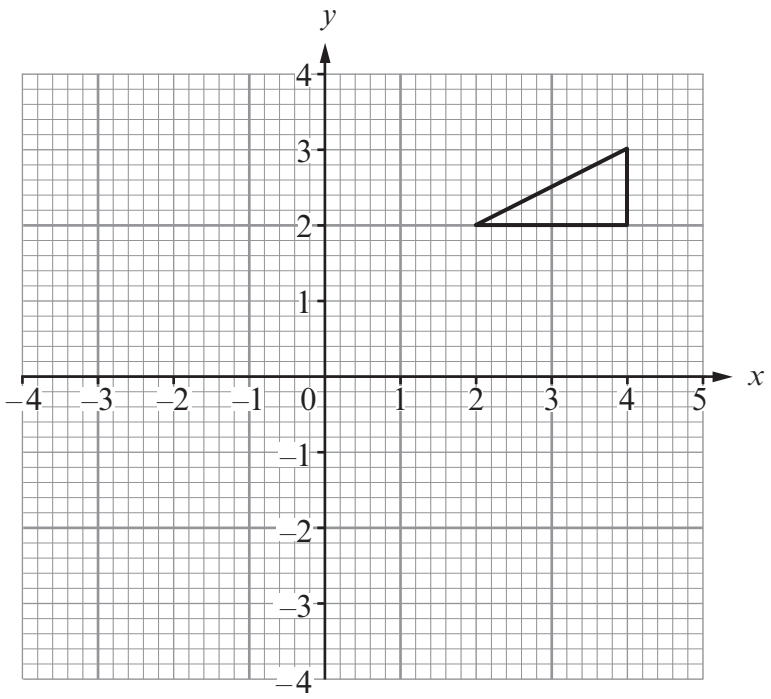
[1]



Examiner only

(c) Draw the reflection of the shape in the line $x = 1$.

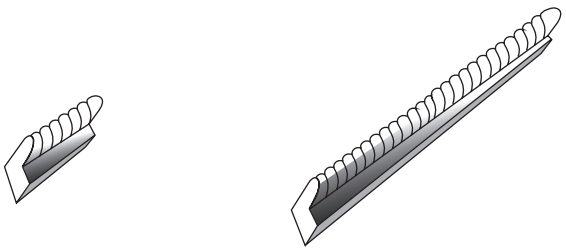
[2]



Turn over.

Examiner only

12. Path edging strips come in two different lengths.



Size A Size B

Diagram not drawn to scale

Size A is x cm long and size B is four times as long as size A.

(a) Robbie uses 3 size A and 6 size B strips to edge one side of the length of his path.
Write down and simplify an expression, in terms of x, for the length of Robbie's path in centimetres.

.....

.....

.....

[2]

(b) Sammy's path is twice as long as Robbie's path.
Sammy decides to use the edging strips along one side of the length of his path.
He wants to use as many size B strips as possible, with as few size A strips as possible.
How can he do this?
You must state the number of each size strip he should use.

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[4]