Surname	Centre number	Candidate number
First name(s)		0

GCSE

3320UB0-1

GCSE Mathematics and Numeracy (Double Award)
Unit 2: Non-calculator

Foundation Tier

1 hour 30 minutes
SAMPLE ASSESSMENT MATERIALS

Additional materials

The use of a calculator is not permitted in this examination.

A ruler, a protractor and a pair of compasses may be required.

Instructions to candidates

Use black ink or black ball-point pen. Do **not** use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

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

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

If you need more space, use the additional page(s) at the back of this booklet. Number the question(s) correctly.

Take π as 3·14.

Information for candidates

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

In question 7, the assessment will take into account the quality of your mathematical organisation, communication and accuracy in writing.

For examiner's use only		
Question	**Maximum mark**	**Mark awarded**
1.	4	
2.	3	
3.	2	
4.	3	
5.	2	
6.	5	
7.	6	
8.	3	
9.	4	
10.	4	
11.	3	
12.	4	
13.	3	
14.	4	
15.	3	
16.	3	
17.	5	
18.	4	
Total	**65**	

Answer **all** questions.

Examiner only

1. (a) The attendance figures for two rugby matches are shown below.

Match A attendance	**Match B attendance**
30 152	23 451

(i) Write down, in words, the attendance at Match A. [1]

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(ii) Write the attendance at Match B correct to the nearest hundred. [1]

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(b) A number has **exactly** four factors. [1]
Its factors are 1, 3, 9 and the number itself.
What is the number?

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.....

(c) Write these numbers in order, starting with the lowest number. [1]

–7 0 –10 11

lowest highest

Examiner only

2. Here is a list of some 2-D shapes.

Equilateral triangle	Isosceles triangle	Kite	Parallelogram

Rhombus	Rectangle	Scalene triangle	Trapezium

Using **only the shapes in the list**, write down the special name for:

(a) each of the two shapes whose sides are all of equal length [2]

…..……and ……..……

(b) the quadrilateral with four angles of equal size. [1]

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3. Siôn completes a reading test and a spelling test. [2]
His scores are shown in the table below.

Examiner only

Test	Score
Reading	$\frac{7}{10}$
Spelling	$\frac{3}{4}$

In which test did Siôn get the greater score?

Reading ☐ Spelling ☐

You must show working to support your answer.

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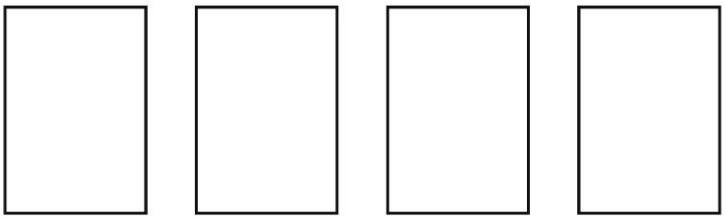
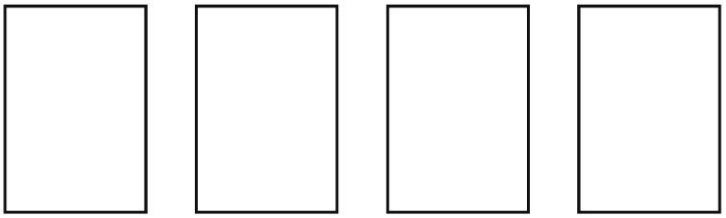
Examiner only

4. (a) Ceryn and Hywel each have a set of four cards.
A card is chosen at random from each set of cards.

(i) Write a number on each of Ceryn's four cards so that it is **likely** that her chosen card will show a 6. [1]



(ii) Write a number on each of Hywel's four cards so that it is **impossible** that his chosen card will show an even number. [1]



(b) Abdi has a bag containing ten counters. [1]
There are five blue counters and five red counters in the bag.

Abdi adds yellow counters to the bag.

Now, when Abdi selects a counter at random from the bag, there is an even chance of selecting a yellow counter.

How many yellow counters did Abdi add to the bag?

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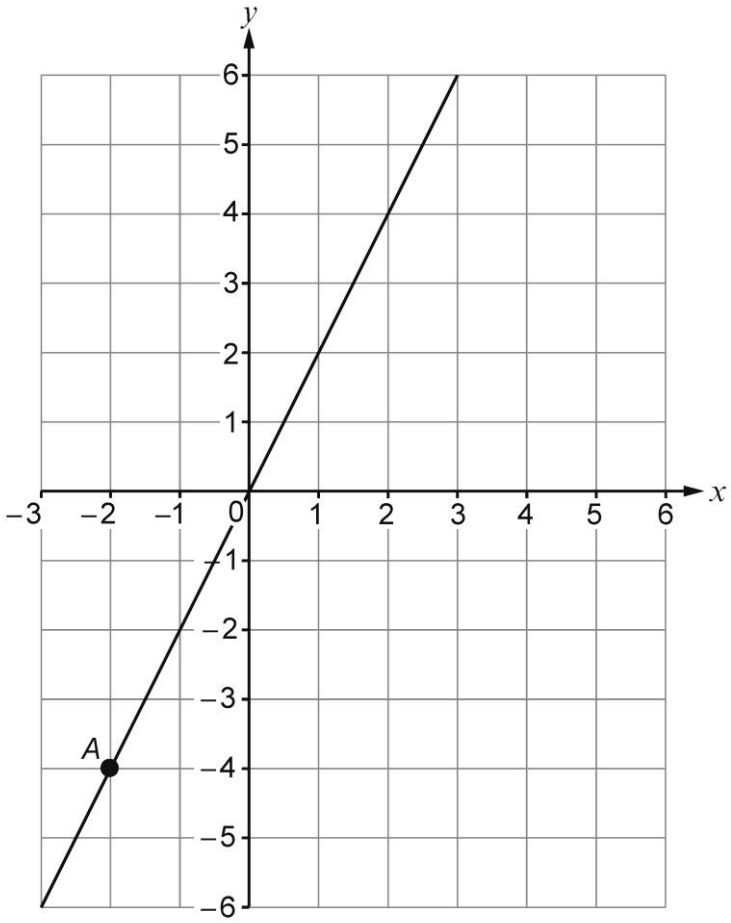
Abdi adds …….. yellow counters to the bag.

Examiner only

5. The grid below shows part of a straight line that passes through the point *A*.



(a) What are coordinates of the point *A*? [1]

(…….. , ……..)

(b) Bethan thinks that, if the straight line was extended, the line would go through the point (6, 10). [1]

Is Bethan correct?

YES ☐ NO ☐

Explain your reasoning.

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6. (a) Calculate 13^2. [1]

Examiner only

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(b) Write down $\sqrt{81}$. [1]

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(c) Calculate 30 – 5 × 4. [1]

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(d) Write down the prime number between 20 and 28. [1]

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(e) Calculate 20 ÷ 0·4. [1]

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Examiner only

7. *In this question, you will be assessed on the quality of your organisation, communication and accuracy in writing.*

In the diagram below, *ABCD* and *DEFG* are two identical squares.

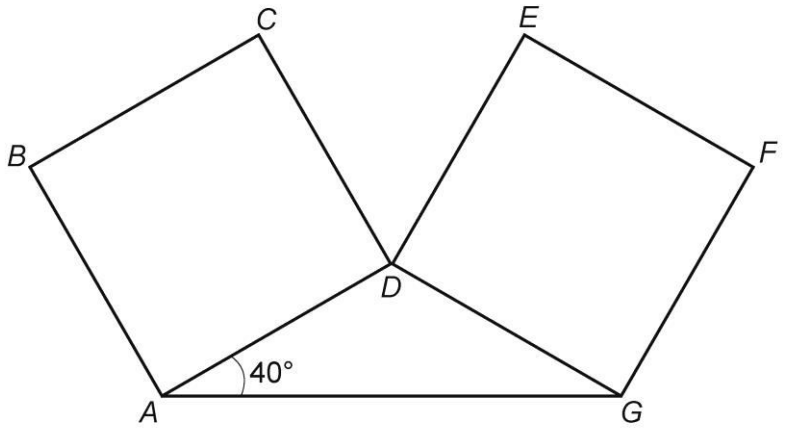

Diagram not drawn to scale

Show that angle $C\hat{D}E$ is an acute angle. [4 + 2 OCW]
You must show all your working.

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8. David has three rocks, labelled A, B and C. [3]
Rock A has a mass of 6·21 kg.
Rock B has a mass of 3·5 kg.

The three rocks are placed on a weighing scale.
The total mass of the three rocks is 12·46 kg.

Calculate the mass of the rock C.

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Mass of rock C = ……. kg

9. (a) Simplify $2x + 4x - x$. [1]

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(b) Simplify $8y \times 6$. [1]

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(c) Find the value of $2t + 4w$ when $t = -5$ and $w = 8$. [2]

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Examiner only

10. (a) Draw all the lines of symmetry on the following diagram. [2]

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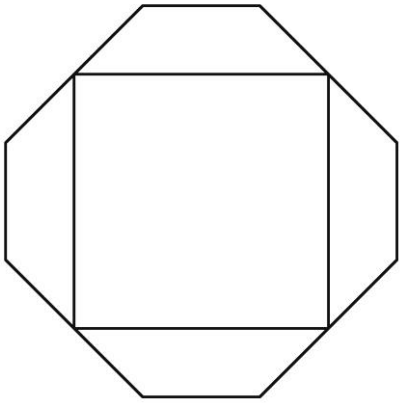
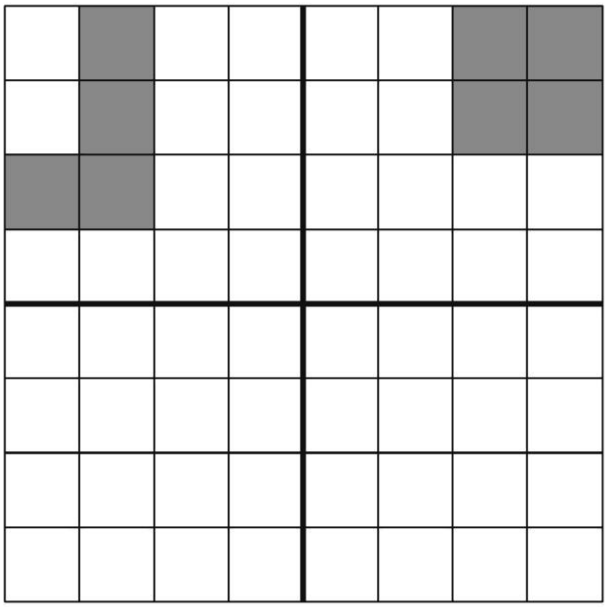


(b) Shade the least number of squares so that the grid has rotational symmetry of order 2. [2]



11. 32 players took part in the Snooker World Championship in 2024. [3]
Some players were from Wales, some came from the rest of Great Britain, and the remainder came from the rest of the world.

There were three times as many players from the rest of Great Britain as there were from Wales.
There were two more players from the rest of the world than there were from Wales.

Calculate how many players came from each region.

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……...

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……...

……...

……...

Wales ……..... Rest of Great Britain …… Rest of the world …...……

Examiner only

Examiner only

12. Bag A contains five cards numbered 1, 3, 5, 7 and 9, respectively.
Bag B contains four cards numbered 2, 4, 6 and 8, respectively.

Kate plays a game.
In a game, she takes one card from Bag A and one card from Bag B.
Her score is found by calculating the **product** of the two numbers.

(a) Complete the table to show all of her possible scores. [2]

Bag A \ Bag B	2	4	6	8
9	18	.....	54	.....
7	14	.....	42	.....
5	10	.....	30	.....
3	6	.....	18	.....
1	2	.....	6	.....

(b) Kate wins a prize if she gets a score of 20 or less.
What is the probability that she wins a prize? [2]

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13. Solve $13d + 9 = 5d - 31$. [3]

Examiner only

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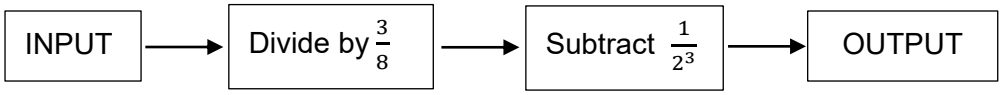
14. A number machine is shown below.



The INPUT number is $2\frac{5}{8}$.

What is the OUTPUT number?

Give your answer as a mixed number. [4]

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15. Find the size of each of the angles marked a, b and c. [3]

Examiner only

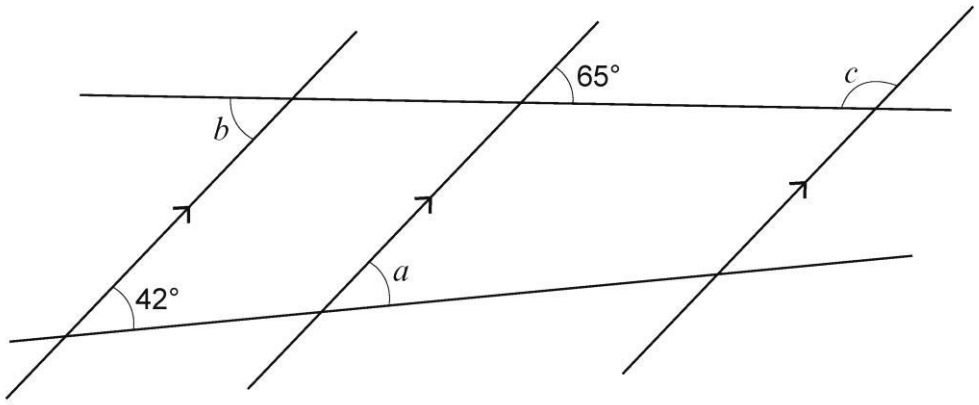

Diagram not drawn to scale

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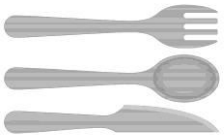
a = ……° b = ……° c = ……°

16. Delyth is making some packs of wooden cutlery for her food stall at the market. Each pack contains one knife, one fork and one spoon. [3]

Examiner only



To make up these packs, Delyth buys:

- some boxes that contain 14 wooden knives each
- some boxes that contain 16 wooden forks each
- some boxes that contain 10 wooden spoons each.

Delyth wants to buy the **least possible number of boxes** so that, in making up the packs, she uses **all** of the knives, forks and spoons she has bought.

Complete the table below to show the number of boxes of each item that Delyth needs to buy.
You must show all your working.

……..……..

……..……..

……..……..

……..……..

……..……..

……..……..

	Number of boxes needed
Knives (14 in each box)	…….. boxes
Forks (16 in each box)	…….. boxes
Spoons (10 in each box)	…….. boxes

Examiner only

17. Rhodri Jones works with his 2 daughters in their family business.

Rhodri is x years old, where x is a whole number.
Megan, his older daughter, is $(x - 23)$ years old.
Gwenda, his younger daughter is 5 years younger than Megan.

On the Jones family business website, it states the following:

> Well-established family business!
> The total age of our 3 workers is greater than 100 years.

Form and solve an inequality to find the youngest possible age Rhodri could be for the last statement to be true. [5]

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Examiner only

18. Every weekend, Ravi works on Saturday and on Sunday.
Ravi is given one job to do on Saturday and one job to do on Sunday.
The options for the job he could be given on either day are:

- answer the phone
- pack boxes.

On any weekend, the probability that Ravi is given the job to:

- answer the phone on Saturday is 0.2
- pack boxes on Sunday is 0.6.

The job given to Ravi on one day is independent of the job given to him on the other day.

(a) Complete the tree diagram below. [2]

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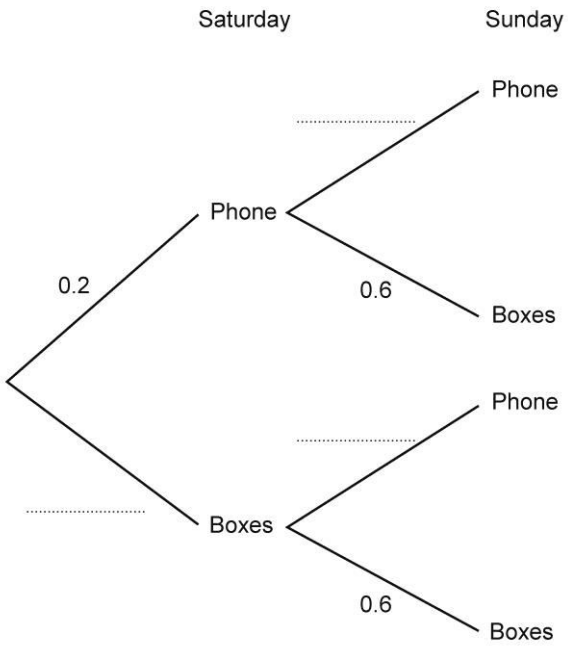

(b) Calculate the probability that, next weekend, Ravi is given the job to pack boxes on Saturday and on Sunday. [2]

Examiner only

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END OF QUESTIONS

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.
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Examiner only