AQA

Functional Skills Level 1
MATHEMATICS

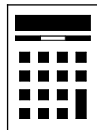## Paper 2 Calculator

Monday 15 May 2023   Afternoon   Time allowed: 1 hour 30 minutes

Materials
For this paper you must have:
- a calculator
- mathematical instruments.

Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.
- State the units of your answer where appropriate.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 60.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

Advice
In all calculations, show clearly how you work out your answer.

For Examiner's Use	
Question	Mark
1–7	
8	
9	
10	
11	
TOTAL	

Section A

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

1 An angle measures 290°

What type of angle is it?

Circle your answer.

[1 mark]

obtuse   reflex   acute   right

2 Write $\dfrac{1}{5}$ as a decimal.

[1 mark]

Answer _____

3 Halid is facing West.

He makes a quarter turn to the left.

Which direction is he facing now?

[1 mark]

Answer _____

4   Work out the range of these numbers.

25   43   56   92   18   31   77

[2 marks]

_____

_____

Answer _____

5   Work out   5% of 340

[2 marks]

_____

_____

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_____

Answer _____

Turn over for the next question

Turn over ▶

0 3

6 Here are 16 values.

21   13   24   38   5   19   26   30

23   10   36   25   12   29   9   14

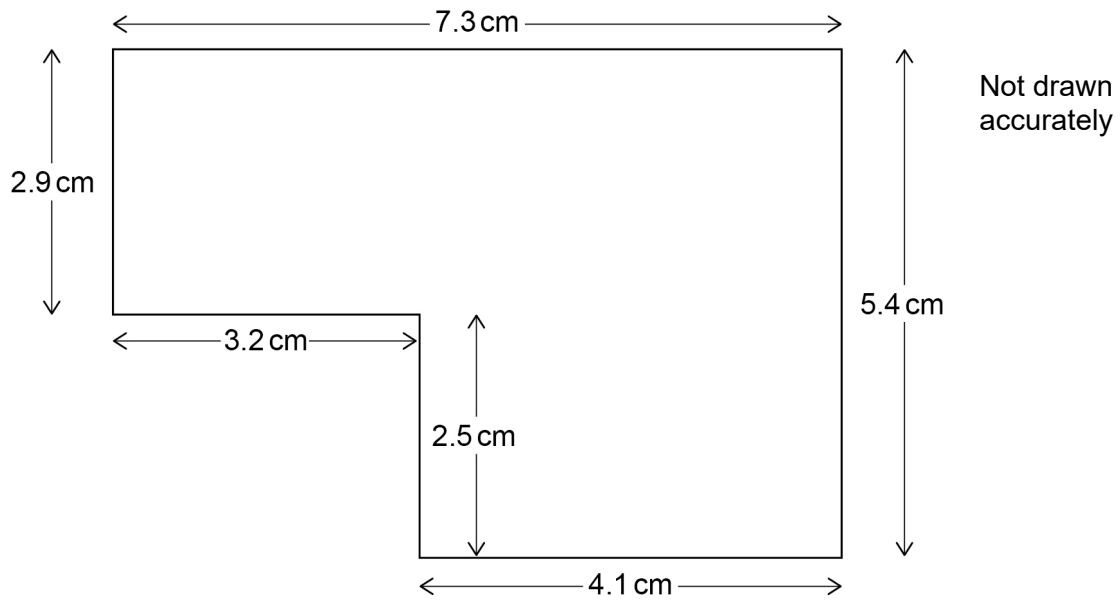Complete the grouped frequency table with the tallies and frequencies.

[2 marks]

Value	Tally	Frequency
1 – 10		
11 – 20		
21 – 30		
31 – 40		

7 Here is an L-shape.

Not drawn accurately

Work out the **area** of the shape.

[3 marks]

_____

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_____

Answer _____ cm²

12

Turn over for Section B

Turn over ▶

Section B

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

8 **Cycling at the lake**

8 (a) A group of 4 adults and 3 children are hiring bikes to cycle around a lake.

The table shows the costs of bike hire.

	Electric Bike Hire	**Standard Bike Hire**
Adult	£34.99	£24.99
Child	£10.75	£8.75

2 of the adults and the 3 children each hire **electric** bikes.

The other 2 adults hire **standard** bikes.

Is £160 enough to hire these bikes?

You **must** show your working.

[4 marks]

8 (b) At 1.15 pm the group start cycling the 36 kilometres around the lake.

They

- cycle around the lake once
- cycle 12 kilometres every hour.

They then have a picnic for 55 minutes.

At what time do they finish the picnic?

[4 marks]

Answer _____

Question 8 continues on the next page

Turn over ►

8 (c) The group will travel home by taxi.

The distance home is 16 km

They need one 7-seater taxi.

Here are the prices for two taxi companies.

Company A
Price = £12.75 + £1.50 × the distance in km

Company B
Fixed price £38

How much cheaper is it for the group to use **Company A** than **Company B**?

[3 marks]

Answer £ _____

11

9   **Fruit grower**

Anar grows fruit on her farm.

9 (a)   Anar is going to divide a field on her farm into 6 m by 4 m rectangles.
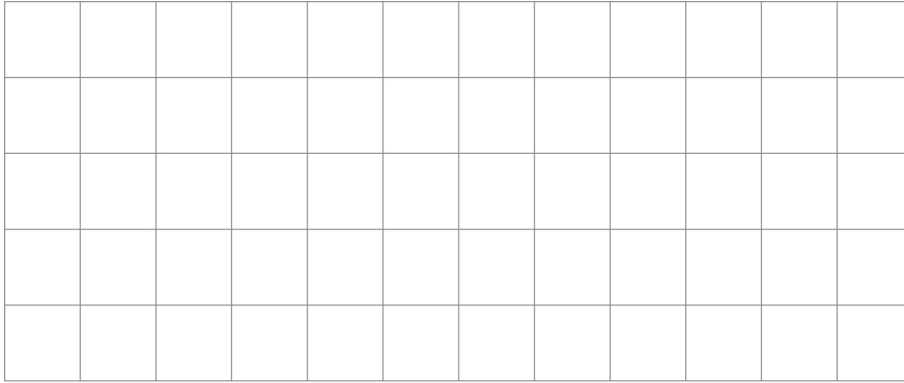
The grid below is a scale drawing of the field.

It is drawn on centimetre square paper.

Use the grid to show that Anar can divide the field into **ten** of the 6 m by 4 m rectangles.
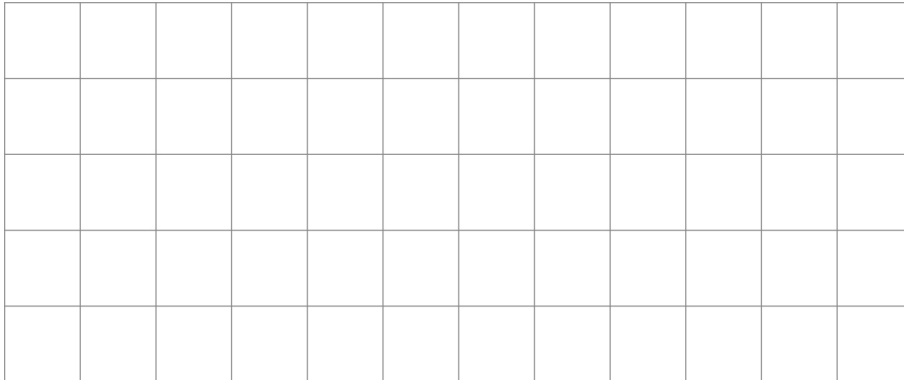
[3 marks]

You may practise on this grid.

Scale: 1 cm represents 2 m

Put your answer on this grid.

Scale: 1 cm represents 2 m

Turn over ►

09

9 (b) Anar buys some cherry trees and apple trees to plant in another field.

She buys 7 cherry trees.

The ratio of cherry trees to apple trees is   1 : 3

Type of tree	Cost per tree
Cherry	£33.25
Apple	£25.79

Work out the **total** cost of the trees.

[5 marks]

Answer £ _____

Do not write
outside the
box

9 (c) Anar has six blueberry bushes.

Here are the weights of blueberries in kilograms she picked from the bushes this year.

| 3.62 | 3.82 | 3.87 | 3.68 | 3.95 | 3.74 |

Last year she picked an average of 3.72 kilograms of blueberries per bush.

Anar says,

"On average, I have picked a **greater** weight of blueberries per bush this year."

Is she correct?

You **must** show your working.

[3 marks]

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11

Turn over for the next question

Turn over ▶

IB/G/Jun23/8361/2

10   Sweet shop

Robin sells 'pick and mix' sweets.

10 (a)   Indie buys a bag of sweets from Robin.

She chooses only jelly snakes, cola bottles and sour apples.
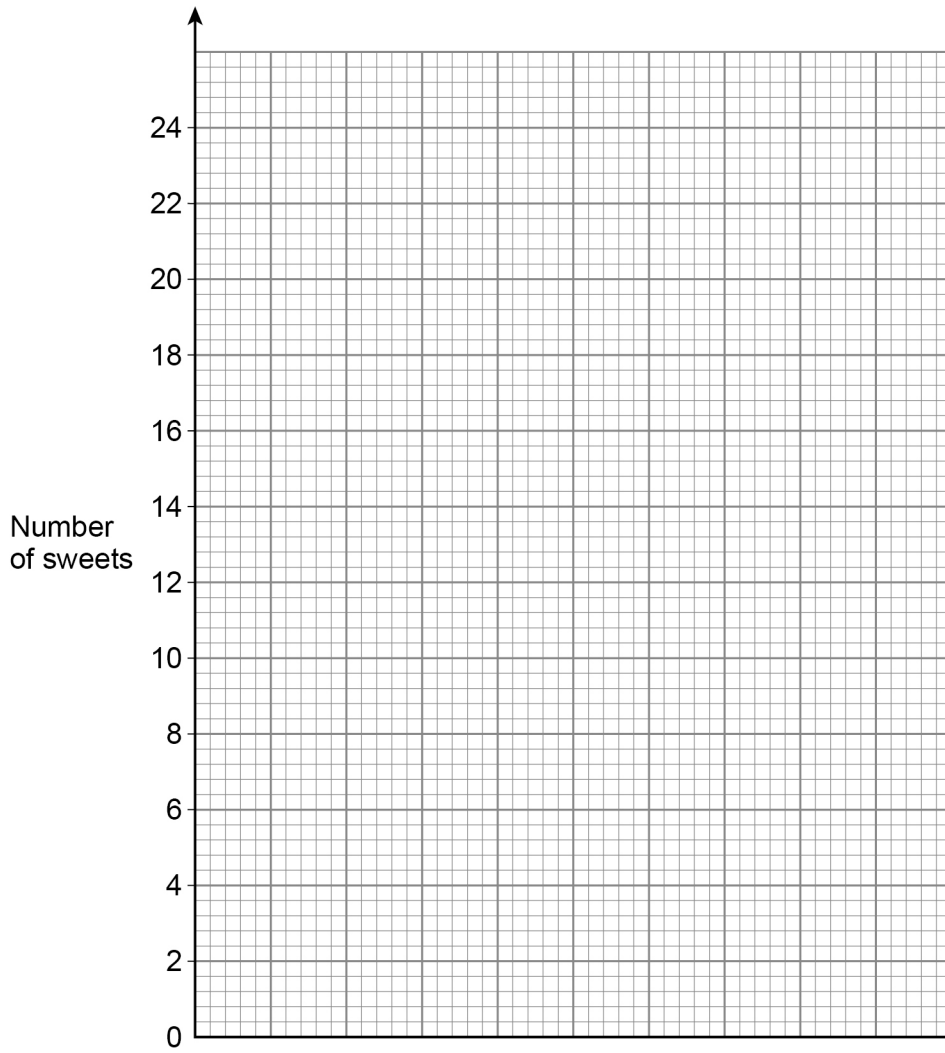
She picks

47 sweets in total

17 jelly snakes

half as many sour apples as cola bottles.

Draw a bar chart on the grid on the page opposite to represent Indie's sweets.

[5 marks]

Number
of sweets

10 (b) Robin has 5 jars of sweets.

Each jar contains 1.8 kg of sweets.

Robin makes up some bags of sweets to sell.

Each bag contains 160 g of sweets.

How many bags can he fill?

[4 marks]

Answer _____

10 (c) Robin buys 15 kg of toffees for £120

He sells the toffees in bags.

Each bag contains 1 kg of toffees.

Robin wants to make a profit of **exactly** 30% on the cost of the toffees.

How much should he charge for each bag of toffees?
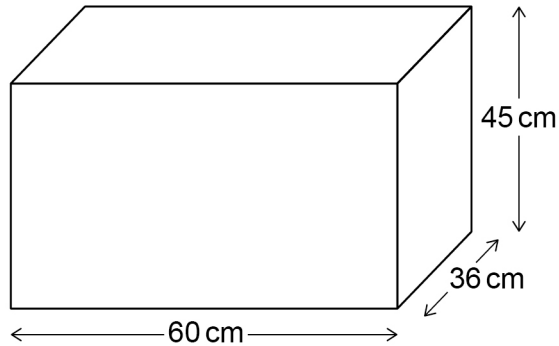
[4 marks]

Answer £ _____

Turn over for the next question

13

Turn over ▶

11   Keeping fish

George keeps fish.

11 (a)   George wants to buy a new pump for this fish tank.

45 cm

36 cm

60 cm

He has to buy the correct size of pump for the volume of the fish tank.

He finds this information.

Size of pump	Small	Medium	Large
Volume of tank	Less than 55 litres	55 litres to 90 litres	More than 90 litres

1 litre $= 1000 \, cm^3$

Work out the correct **size of pump** that George needs for the fish tank.

You **must** show your working.

[4 marks]

Answer _____

11 (b) George wants to buy 6 angelfish.

He sees these adverts from two shops.

> **Shop Y**
>
> Angelfish
>
> £14.98 each
>
> Buy 5 and get a
> 6th half price

> **Shop Z**
>
> Buy 2 angelfish
> for £26

George wants to pay the lowest possible price for 6 angelfish.

Which of these shops should he choose?

You **must** show your working.

[6 marks]

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Answer _____

Turn over ▶

11 (c) George uses 0.4 g of fish food each day.

He buys a 15 g tub of fish food.

Is this enough for **more than** 6 weeks?

You **must** show your working.

[3 marks]

_____

_____

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13

END OF QUESTIONS

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