FUNCTIONAL SKILLS MATHS LEVEL 2
PAPER 1

Please write clearly in block capitals.

Centre number | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____

Functional Skills Level 2
MATHEMATICS
Section A: Non-Calculator Paper
Section B: Calculator Paper

Paper A/B

Time allowed: 30 minutes / 1 hour 30 minutes

Materials

For this paper you must have:

- mathematical instruments.

You **must not** use a calculator for section A.
You may use a calculator for section B.

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.
- 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 section A is 15 and section B is 45.
- 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.

SECTION A : Non-Calculator

Answer ALL questions.
Write your answers in the spaces provided.

1 Write the following numbers in order of size.

$3.2 \quad 3.27 \quad 3.72 \quad 3.702 \quad 3.02$

[1 mark]

Answer _____

2 Work out

$$1\frac{3}{5} + 2\frac{1}{4}$$

[2 marks]

Answer _____

3 The distance between two towns on a map measures 8 cm. The map has a scale of $1:25000$

What is the actual distance between the two towns in km?

[1 mark]

Answer _____

Turn over for next question

4

4 Calculate $6.402 + 3.545$

[1 mark]

Answer _____

5 The distance an object has moved from its starting point, d, after an amount of time, t, is given by the formula

$$d = 29t^2$$

where d is measured in metres and t is measured in seconds.

Estimate the distance the object has travelled after 5.1 seconds.

[3 marks]

Answer _____

6 Calculate $4335 \div 6$

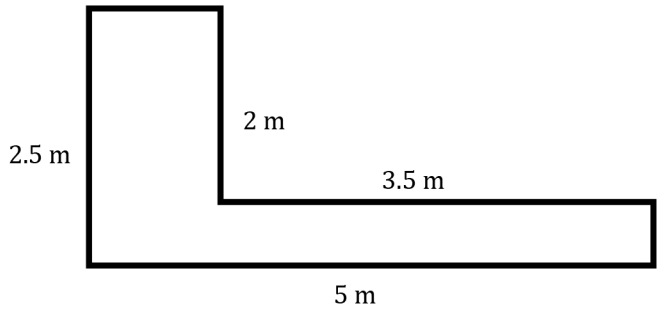
[1 mark]

Answer _____

Turn over for next question

5

7 Some painters are planning on painting a shape on a wall. They have drawn a sketch of the painting below.



Calculate the area the painters are planning on painting.

[3 marks]

Answer _____

8 It would take 7 hours for 3 people to paint the shape on the wall. How long would it take to paint the shape on the wall if another person joins, assuming that they all paint at the same rate?

[3 marks]

Answer _____

End of Section A

6

SECTION B : Calculator

Answer ALL questions.
Write your answers in the spaces provided.

9 Write in digits five hundred and seven thousand, seven hundred and twenty three.

[1 mark]

Answer _____

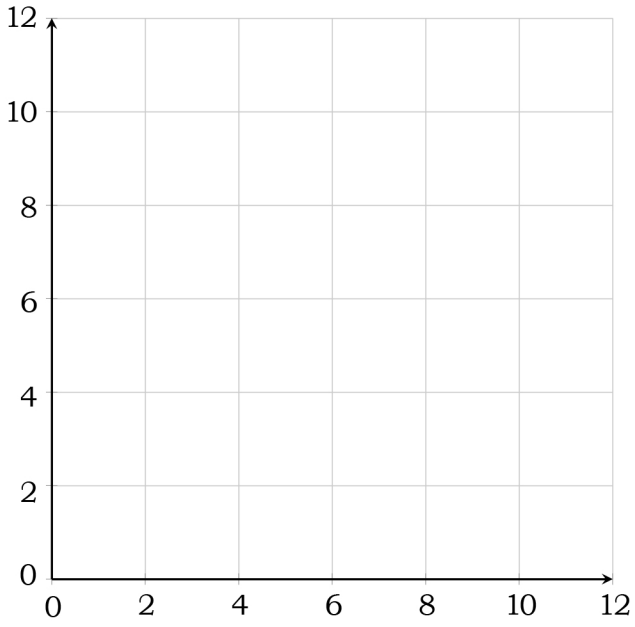
10 A manufacturing company produce metal fixings for a DIY retailer.
On one day the manufacturer produces 23040 fixings, of which 1920 are faulty.

What fraction of the fixings produced on this day were defective?
Give your answer in its simplest form.

[2 marks]

Answer _____

11 Plot the coordinate (4,3) on the graph below.



[1 mark]

Turn over for next question

4

12 Darren has been given £6000 from his parents to put towards a car in the future. He is looking for the best savings account to put his money in for 2 years.

He sees these two savings accounts:

YTwo savings account	**Standard savings account**
Save for 2 years and receive 4.25% interest	2.5% interest added at the end of every year

He says that he would have over £50 more after 2 years if he used the Standard savings account instead of the YTwo savings account.

Is he correct?

Show your working.

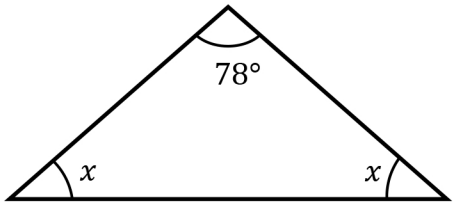
[5 marks]

Answer _____

Turn over for next question

5

13 The diagram below shows an isosceles triangle. Find the missing angles in this isosceles triangle, labelled x.



[2 marks]

Answer _____

14 Jessie measures the heights of her 7 friends, and works out that their mean height is $1.73\ \text{m}$. She measures her own height and works out that the mean height of all of them is $1.74\ \text{m}$.

What is Jessie's height?

[3 marks]

Answer _____

Turn over for next question

5

15 Demi pre-booked a hire car to use on holiday in Spain. She paid £70 in total which gave her car hire for 7 days.

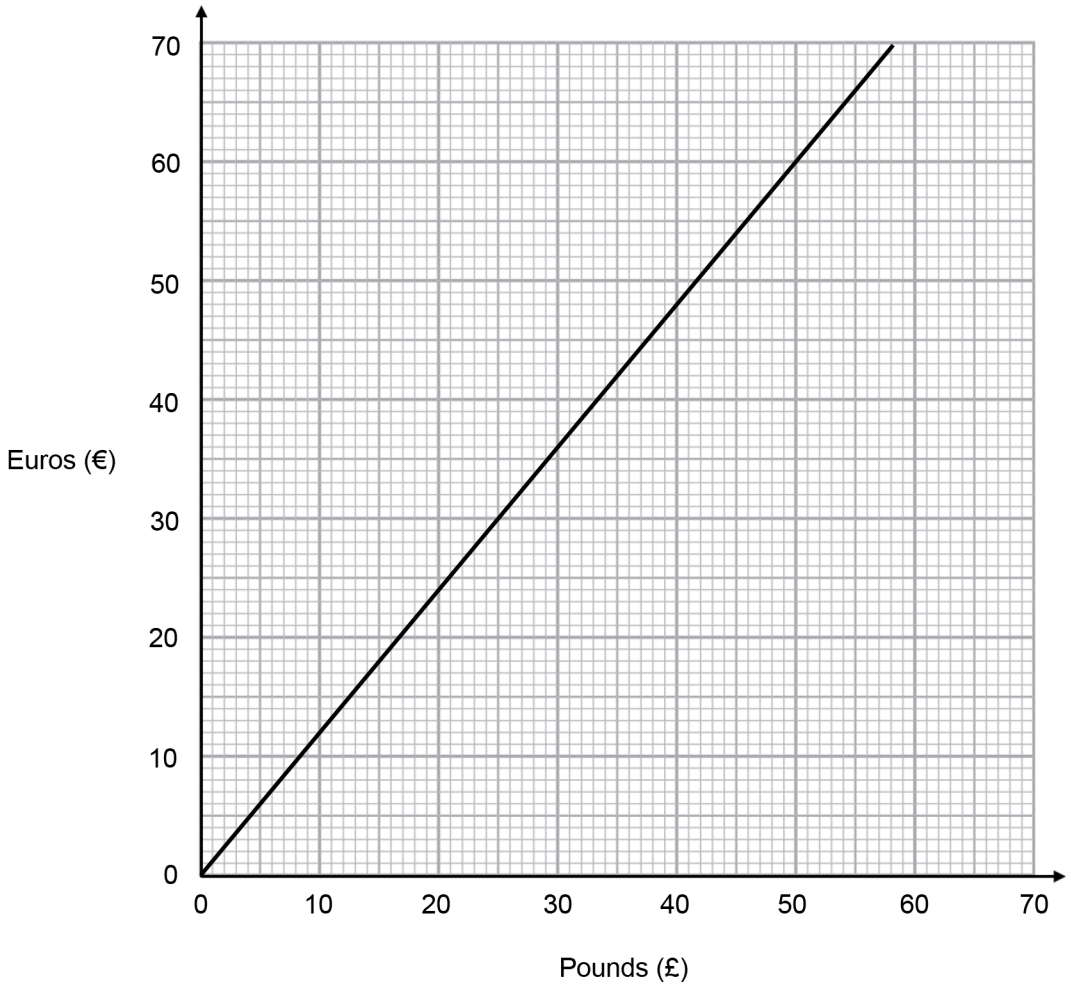
When she went on holiday, she realised that it may have been cheaper to hire the car in Spain, instead of pre-booking it.

The cost of the car hire, in Euros (€), in Spain is calculated using this formula:

$$\text{cost} = 0.6(30 + 15d)$$

where d is the number of days the car is hired for.

Demi uses this conversion graph to convert between Pounds (£) and Euros (€).



Work how much Demi would have saved by paying for the car hire in Spain, instead of pre-booking it. Give your answer in Pounds (£).

[5 marks]

Answer space provided on next page

5

15 cont

Answer _____

16 Whilst Demi is on holiday in Spain, she buys a coat that was reduced by 20% in a sale. If the sale price was €180, how much was its original price?

Give your answer in Euros (€).

[2 marks]

Answer _____

Turn over for next question

2

17 The table gives information about the number of girls and boys in Years 9 and 10.

	Year 9	Year 10	Total
Boys		97	
Girls	112		196
Total	174		

Complete the two-way table and use this to find the probability that a student selected at random is a boy.

[4 marks]

Answer _____

18 Susan makes fudge using 2 parts of chocolate to 3 parts of frosting. Susan makes a batch of fudge using 510 g of frosting.

She eats 10% of the fudge she has made, and then splits the remaining fudge into individual bars, each weighing 100 g.

How many individual bars of fudge can she make?

[3 marks]

Answer _____

Turn over for next question

7

19 Donald is a zookeeper. In 2018, he measured the weights of the 6 leopards that are kept in the zoo, and recorded his results in the table below.

Leopard	1	2	3	4	5	6
Weight (kg)	32	29	27	34	30	27

In 2021, the median weight of the leopards was 68 lbs.

$1 \text{ kg} = 2.20 \text{ lbs}$

Calculate the percentage change in the median weight of the leopards from 2018 to 2021.

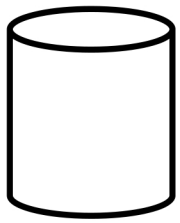
[5 marks]

Answer _____

Turn over for next question

5

20 A paperweight is shaped as a cylinder. The paperweight has a radius of $2\ \text{cm}$ and a height of $5\ \text{cm}$.



The paperweight has a mass of $350\ \text{g}$. Calculate its density in g/cm^3.

Use $\pi = 3.14$.

[4 marks]

Answer _____

Turn over for next question

4

21 Nabeela travelled to London by train. Her journey was made up of two parts, including a short wait in between.

One train into York and then another train into London.

The first train departed at 07:05 and the journey lasted for 12 minutes.

The second train departed at 07:27 and the journey lasted for 122 minutes.

The total distance travelled was 197 miles.

What was Nabeela's average speed for the entire journey?

Give your answer in miles per hour (mph).

[4 marks]

Answer _____

Turn over for next question

4

22 A shop has three offers on cola.

Offer 1	**Offer 2**	**Offer 3**
2 litre bottle	4×330 ml cans	500 ml bottle
Price: £1.80 Offer: 10% off	Price: £2.20 Offer: half price	Price: 60p Offer: $\frac{1}{4}$ off

Which offer provides the best value for money?

Show your working.

[4 marks]

Answer _____

End of Section B

4