

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.



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# **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 3.27 3.72 3.702 3.02	
		[1 mark]
		[]
		—
		_
	Answer	
2	Work out	
	3 1	
	$1\frac{1}{5}+2\frac{1}{4}$	
	5 т	[0
		[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 nort question	
	i urn over for next question	

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 ÷ 6	
		[1 mark]
		-
		-
	Answer	-
	Turn over for next question	

7	Some painters are planning on painting a shape on a wall. They have drawn a sketch	
	of the painting below. 2  m $2.5  m$ $3.5  m$ $5  m$ Calculate the area the painters are planning on painting.	[3 marks]
		-
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	

# **SECTION B : Calculator**

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



Darren has been given £6000 from his is looking for the best savings account	parents to put towards a car in the future. He 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 m savings account instead of the YTwo sa	nore after 2 years if he used the Standard avings account.
Is he correct?	
Show your working.	
Answer	
<b>T</b>	r for nort quantion
i urn ove	er for next question

13	The diagram below shows an isosceles triangle. Find the missing angles in this isosceles triangle, labelled <i>x</i> . $ \begin{array}{c} \hline 78^{\circ} \\ \hline x \\ \hline \end{array} $	
		[2 marks]
	Answer	
14	Jessie measures the heights of her 7 friends, and works out that their mean height is 1.73 m. She measures her own height and works out that the mean height of all of them is 1.74 m. What is Jessie's height?	
		[3 marks]
		_
	Answer	_
	Turn over for next question	

Demi pre-booked a hire car to use on holiday in Spain. She paid  $\pm 70$  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:

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 (€).



5

	10	
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]
	A	
	Answer	
	Turn over for next question	
		Turn over ▶

	Year 9	Year 10	Total
Boys		97	
Girls	112		196
Total	174		
Ansv Susan makes fudge us	ver	te to 3 parts of frosting.	Susan makes a
Answ Susan makes fudge us batch of fudge using 51 She eats 10% of the fu individual bars, each w How many individual ba	ver 0 g of frosting. dge she has made, ar eighing 100 g. ars of fudge can she n	te to 3 parts of frosting. nd then splits the remain nake?	Susan makes a ning fudge into
Answ Susan makes fudge us batch of fudge using 51 She eats 10% of the fu individual bars, each w How many individual ba	ver ing 2 parts of chocola 0 g of frosting. dge she has made, ar eighing 100 g. ars of fudge can she n	te to 3 parts of frosting. nd then splits the remain nake?	Susan makes a ning fudge into
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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 kg = 2.20 lbs

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

[5 marks]

5

			Turn over ►
		Turn over for next question	
	Answei		
-	Answer		_
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20	A paperweight is shaped as a cylinder. The paperweight has a radius of 2 cm and a height of 5 cm.	
	The paperweight has a mass of 350 g. Calculate its density in $g/cm^3$ .	
	Use $\pi = 3.14$ .	[4 marks]
		_
		_
		_
		_
		_
	Answer	
	Turn over for next question	

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]
	_
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	_
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	_
	_
Answer	
i uni over for next question	

## **22** A shop has three offers on cola.

Offer 1	Offer 2	Offer 3
2 litre bottle	$4 \times 330$ 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 be	est value for money?	
Show your working.		

Answer

End of Section B