Level 1 Functional Skills Mathematics
SAMPLE PAPER 3

A City & Guilds Group Business

Version: 1.1

Duration: 1 hour 20 minutes
Total marks: 45

SECTION 2 – CALCULATOR PERMITTED

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration*

- If additional answer sheets are used, enter the additional number of pages in this box.
- Before taking the examination, **all candidates** must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.
- Please ensure that you staple additional answer sheets to the **back** of this answer booklet, clearly labelling these with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
- All candidates need to use a **black/blue** pen. **Do not** use a pencil or gel pen, unless otherwise instructed.
- If provided with source documents, these documents **must** be returned to City & Guilds. Do not write on the source documents.

*** I declare that I had no prior knowledge of the questions in this examination and that I will not divulge to any person any information about the questions.**

Please check that your name is correctly printed on the candidate barcode label. If not, please tell the invigilator before the start of the exam.

You should have the following for this assessment

- a calculator
- a pen with black or blue ink
- a pencil (for diagrams, graphs and charts only)
- an eraser
- a 30cm ruler
- a protractor.

General instructions

- Read through each question carefully.
- You may use a dictionary.
- Show your working out (where required).
- Write all your working out and answers in this booklet.
- Check your calculations and check that your answers make sense.
- There are additional pages **including graph paper** at the back of this booklet if you run out of space or ask the invigilator if you need additional sheets of paper.

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SECTION 2 – CALCULATOR PERMITTED

There are **45** marks available in this section.

You should check all your work as you go along.

You may use a calculator.

Q1

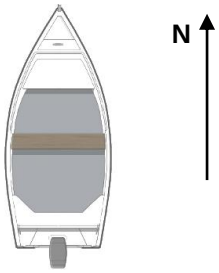
What is 10% of £68.50?

£ _____

(1 mark)

Q2

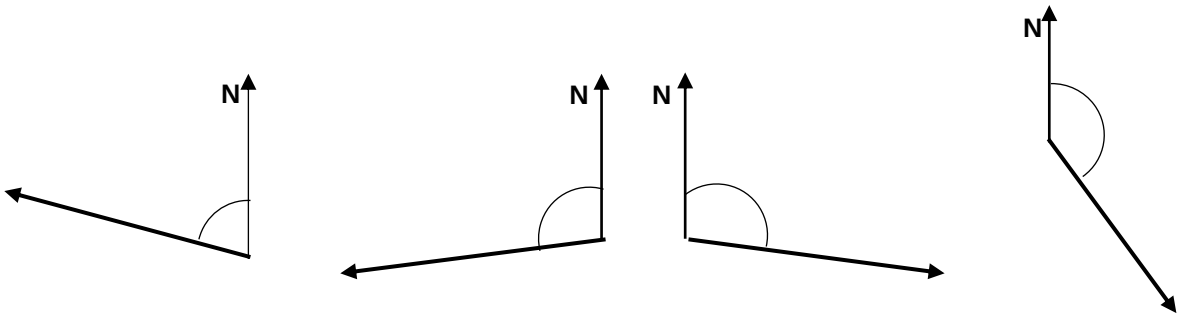
A boat is sailing North.



It turns 100 degrees in an **anti-clockwise** direction.

Which one of the following shows the direction in which the boat is now sailing?

(tick one box)



A ☐ **B** ☐ **C** ☐ **D** ☐

(1 mark)

Q3

A sea diver makes 7 different dives.

He measures how deep he dives.

This table shows his results:

Dive Number	Depth
1	-14m
2	-21m
3	-7m
4	-25m
5	-19m
6	-32m
7	-18m

What was the variation in depth for the seven dives?

Show your working

Variation _____ metres

(1 mark)

Q4

What is the interest paid on £2500 at an interest rate of 15%

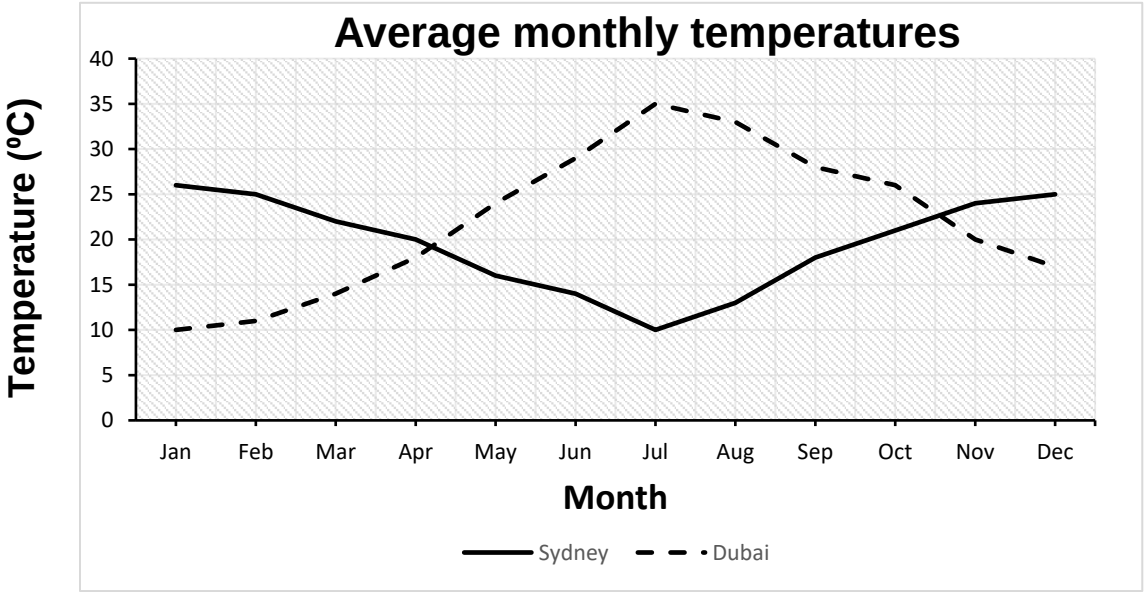
£ _____

(1 mark)

Q5

This chart shows the average monthly temperatures of Sydney and Dubai.

What is the difference in the average monthly temperature of Sydney and Dubai in July?



_____ ^{0}C

(1 mark)

Q6

An aircraft passenger weighs his bag.

He goes to the check-in desks and says that his bag weighs 14g.

The person at the desk says this must be incorrect.

Explain why.

Explanation

(1 mark)

Q7

A parent wants a car seat for his child who is 36 months old.

He needs a seat that is front facing and uses a harness.

He looks at this table.

Car Seats					
		Features			
Child's age	**Seat type**	**Lie Flat**	**Front Facing**	**Rear Facing**	**Uses harness**
From birth - 12 months	Baby	✓	X	✓	✓
6 months – 4 years	Toddler A	X	X	✓	✓
	Toddler B	X	✓	✓	✓
3.5 years – 12 years	Child A	X	✓	✓	✓
	Child B	X	✓	X	X

Which seat type should the parent buy?

Explain your decision.

Which seat type should the parent buy?

_____

Explanation

(2 marks)

Q8

Dave and Sue are community centre workers.

They share the opening of the centre each day.

Their manager shares this work out between Dave and Sue in the ratio 3:1

She makes this rota for the first 16 days of the month.

	Name		**Name**
Day 1	Dave	Day 9	Dave
Day 2	Dave	Day 10	Sue
Day 3	Dave	Day 11	Dave
Day 4	Dave	Day 12	
Day 5	Dave	Day 13	
Day 6	Dave	Day 14	
Day 7	Dave	Day 15	
Day 8	Dave	Day 16	

She needs to complete the rota for the next 5 days.

Complete the rota

Show your working

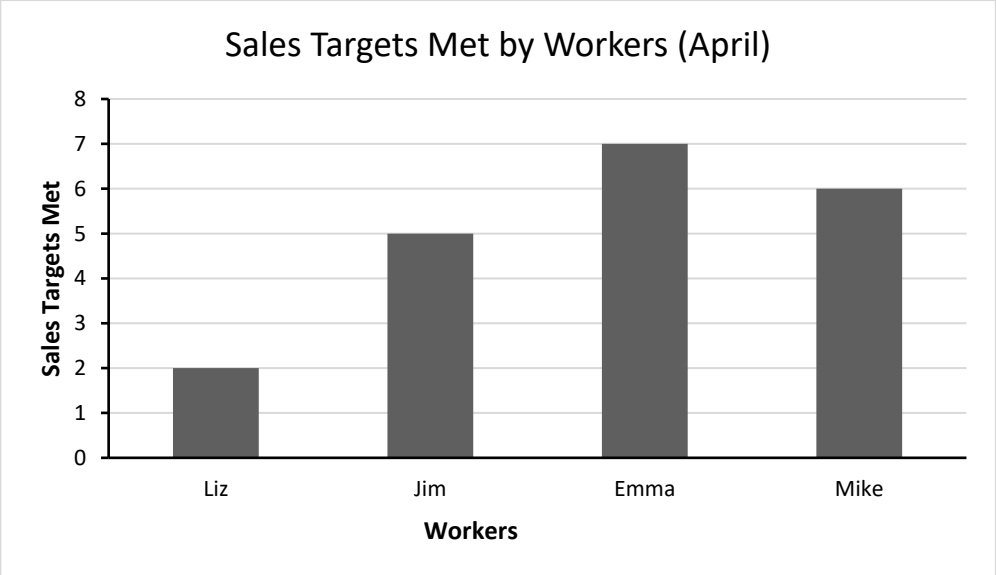
(3 marks)

Q9

A workplace gives one raffle ticket to its workers for each sales target that they meet.

Each month one ticket is drawn at random for a prize.

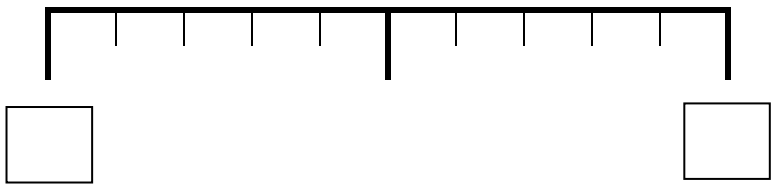
The chart shows the number of sales targets met by each worker.



What is the probability that Jim will win the April draw?

Complete the probability diagram below to show your answer.

Show your working



(4 marks)

Q10

An inspector in a crisps factory measured the weight of crisps in 20 bags to check the accuracy of their weights.

The bags were labelled **Average Contents 25g**

The table below shows the weight of the bags of crisps.

Weight of bags of crisps in grams				
24.4	25.5	25.0	25.3	24.4
26.5	25.2	24.9	24.3	25.1
25.3	25.1	25.1	24.2	24.5
24.7	24.5	26.0	25.4	25.2

Present these weights in **3** suitable groups.

Make one comment about what the results show you.

Show your working

Comment

(4 marks)

Q11

A woman is training for a triathlon race, which includes a 1.5km swim.

She needs her swim time to be 33 minutes.

She trains in a swimming pool, which is 50m long.

She needs to know the average time she must swim each length.

What is this time?

Show your working

_____ minutes _____ seconds

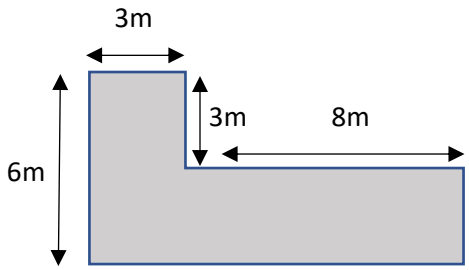
(4 marks)

Q12

A man wants to buy bags of gravel to cover his driveway.

He decides to work out the area of his driveway.

1 bag of gravel covers $14m^2$



Sketch of driveway

Not to scale

What is the area of his driveway?

How many bags of gravel must he buy?

Show your working

Area of driveway _____ m^2

Number of bags of gravel _____

(4 marks)

Q13

A football manager needs to pick his team for the next match.

He gets some information on players in the team from previous matches.

He needs to choose between two players based on their work rate.

He measures their work rate using **average** and **variation** of the distance they covered.

	Distance covered for previous matches (km)						
Player A	7.2	6.8	7.6	8.7	7.4	6.8	8.0
Player B	7.9	7.3	5.8	7.6	***DNP**	***DNP**	6.9

***DNP = Did Not Play**

Which player should the manager choose?

Make two comments with reference to average distance and variation in distances.

Space for working

Which player should the manager choose?

(tick one box)

Player A **Player B**

Comment about average

Comment about variation

(6 marks)

Q14

A **father and his child** want to take self-defence lessons at a karate club for a year.

The club offers lessons for members and non-members.

The club holds one lesson per week.

Everyone who comes to lessons must buy a uniform and take out insurance for the year.

The father and child can only go to half of the lessons for the year.

Karate Club pricelist

- Membership Adult: £20 per month
- Child: £16 per month
- Non-members £8.50 per lesson **(all ages)**
- Insurance £15 per year
- Uniform £95 **(20% discount for members)**

He needs to decide whether to take lessons as members or non-members.

What should he decide to do? Explain your answer using figures.

Show your working

Decision *(tick one box)*

Member ☐ **Non-member** ☐

Explanation

(6 marks)

Q15

The owner of a trampoline park has a floor plan.

She wants to put 4 trampolines in **zone 3**.

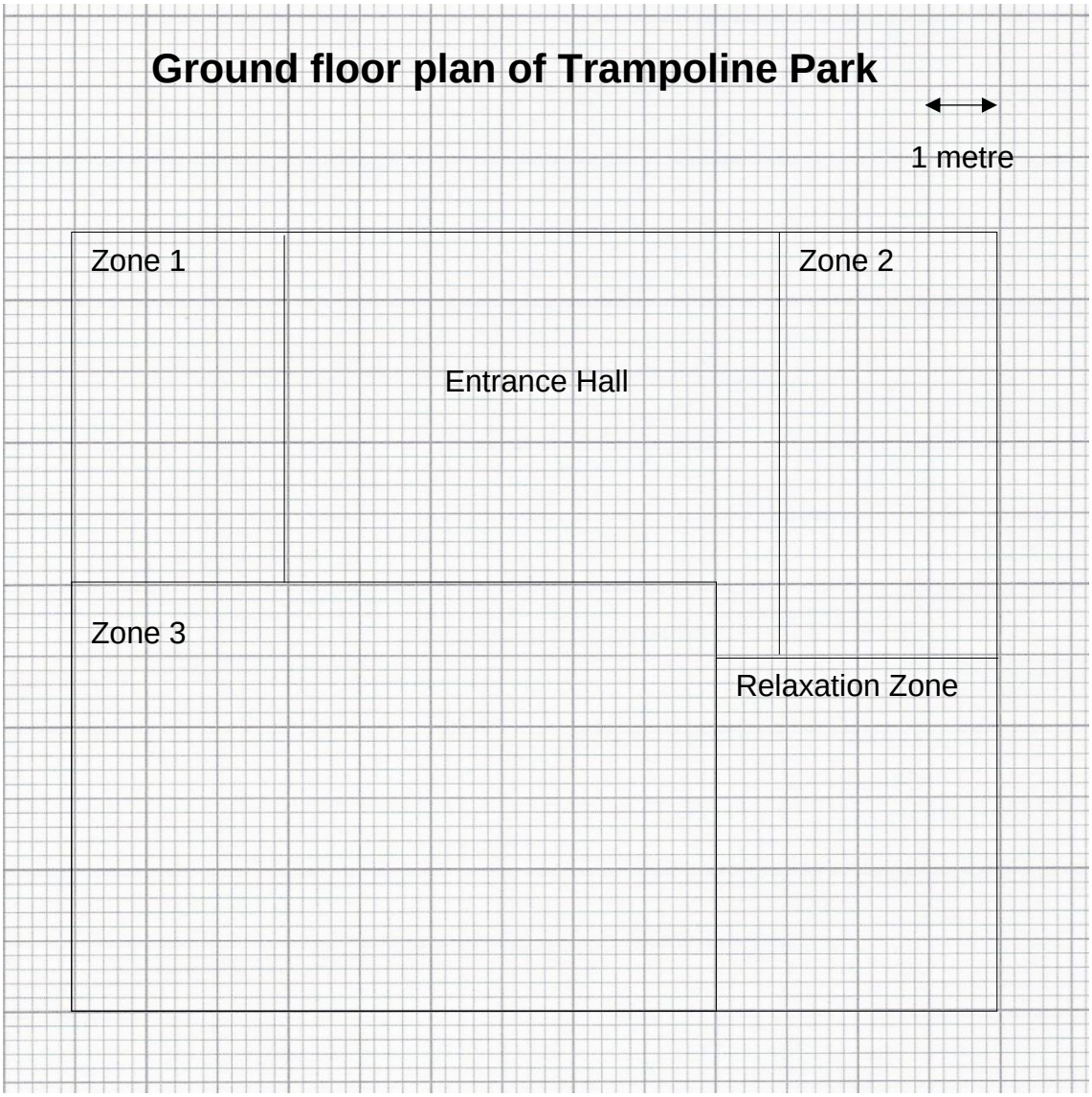
She needs a scale diagram to see where the trampolines will go.

Each trampoline measures 3 metres by 1.8 metres.

She wants them placed with 2 lines of symmetry in **zone 3**.

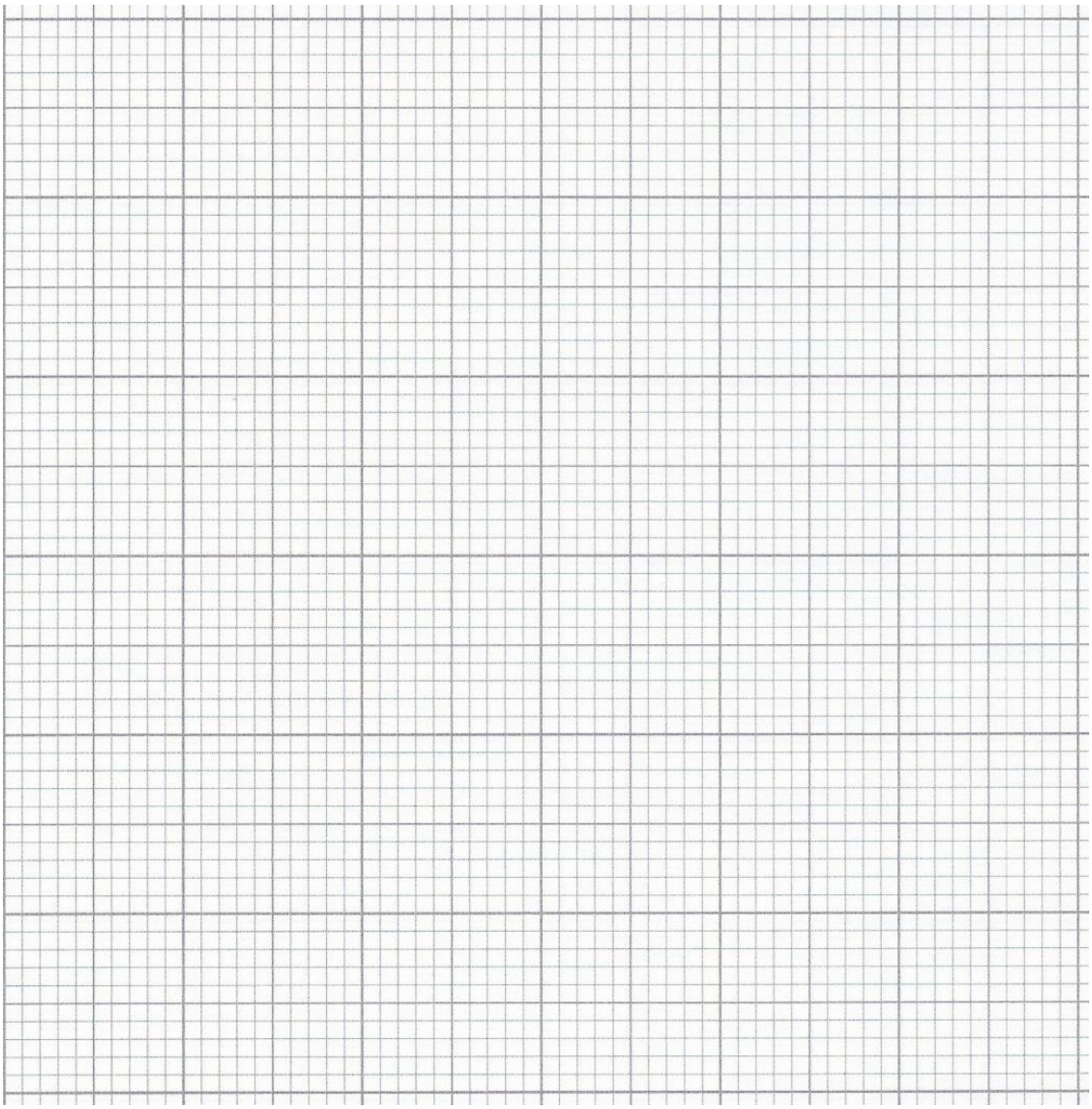
Complete the plan below to show the positions of the trampolines.

Draw the 2 lines of symmetry.



(6 marks)

Spare graph paper for Question 15



Extra space for working out and answers

End of Section 2