Level 1 Functional Skills Mathematics
SAMPLE PAPER 3

City & Guilds
A City & Guilds Group Business
Version: 1.0

Duration: 25 minutes
Total marks: 15

SECTION 1 – CALCULATOR NOT 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.
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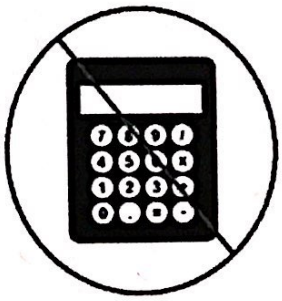
You should have the following for this assessment:

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



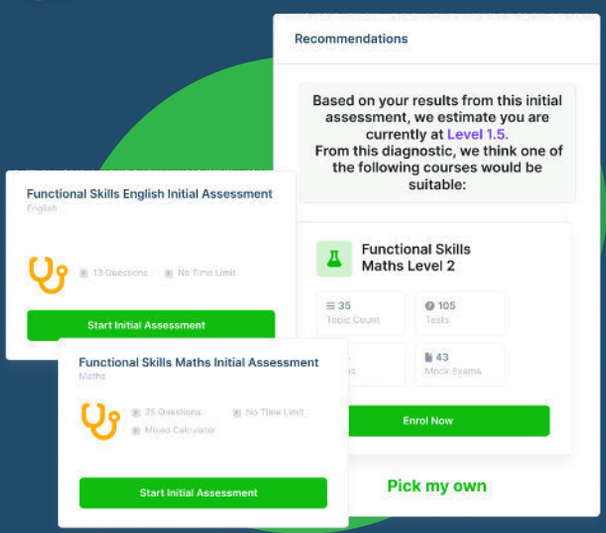
You must NOT use a calculator for Section 1.

General instructions

- Read through each question carefully.
- You may use a dictionary.
- Write all your answers in this booklet.
- Check your calculations and check that your answers make sense.

PASS FUNCTIONAL SKILLS

FUNCTIONAL SKILLS ONLINE COURSES



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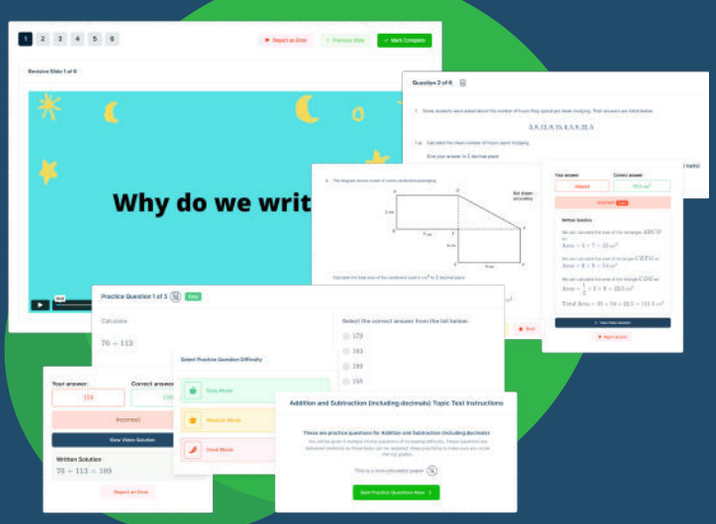

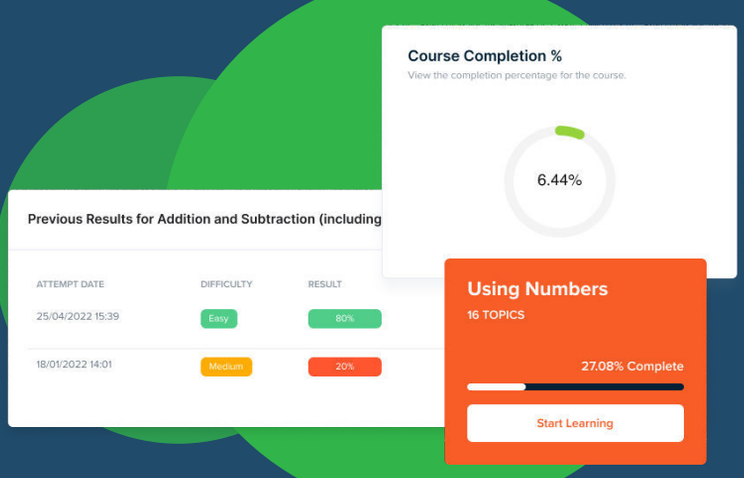

- See your progress through as you progress through each topic area
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SECTION 1 – CALCULATOR NOT PERMITTED

There are **15** marks available in this section.

You should check all your work as you go along.

You must **not** use a calculator in this section.

Q1

4.7 x 1000 =

4700

(1 mark)

Q2

16 ⅔ is the same as

(tick one box)

A $\frac{18}{3}$ ☐

B $\frac{50}{3}$ ☑

C $\frac{32}{3}$ ☐

D $\frac{48}{3}$ ☐

(1 mark)

Q3

What is 8% as a decimal?

0.08

(1 mark)

Q4

12^2 =

144

(1 mark)

Q5

What is 7.2857 rounded to two decimal places?

7.29

(1 mark)

Q6

$8 + (7 - 5) \times 3 =$

14

(1 mark)

Q7

What is two hours and thirty eight minutes in **minutes**?

158 **minutes**

(1 mark)

Q8

What is $\frac{2}{5}$ of 300m?

120 **metres**

(1 mark)

Q9

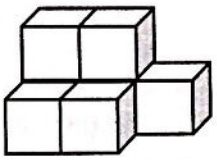
Which one of these lists of decimals is in **increasing** order?

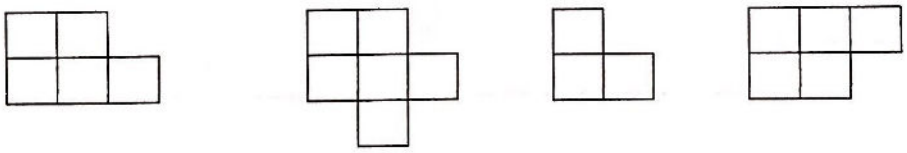
(tick one box)

A	0.401	0.42	0.503	0.59	☑
B	0.59	0.503	0.42	0.401	☐
C	0.42	0.59	0.401	0.503	☐
D	0.503	0.59	0.42	0.401	☐

Q10

Which is a **plan view** of the object shown?





(tick one)

A ☐ **B** ☐ **C** ☐ **D** ☑

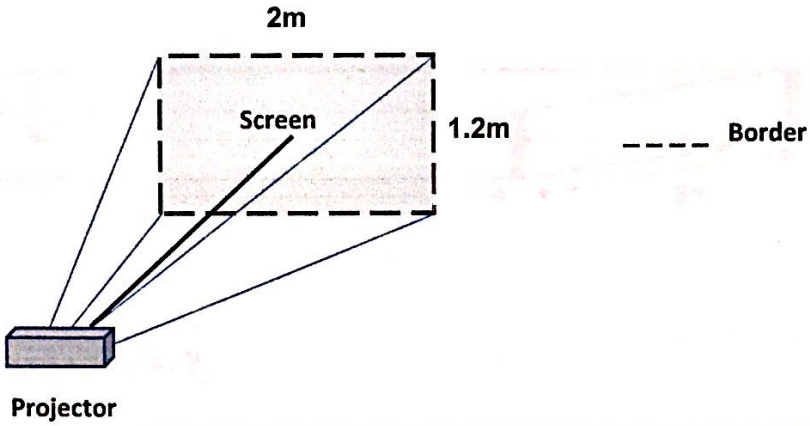
(1 mark)

Q11

A community centre projects films on to a screen.

The manager wants to make a wooden border around the screen.

She needs to order the wood.



What length of wood does she need to order?

Show your working

2 + 1.2 + 2 + 1.2

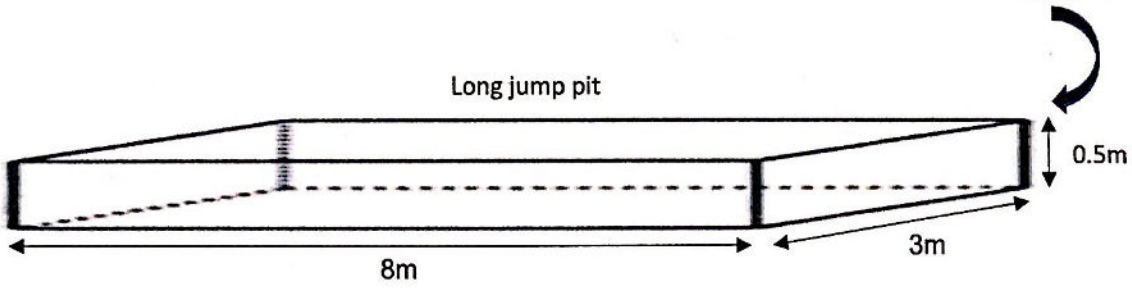
6.4 m

(2 marks)

Q12

A sports club needs to replace the sand in a long jump pit.

The groundsman works out the capacity of the long jump pit to order enough sand.



What amount of sand does he order?
Put units on your answer.

Show your working

$8 \times 3 \times 0.5 = 12$

$12 m^3$

(3 marks)

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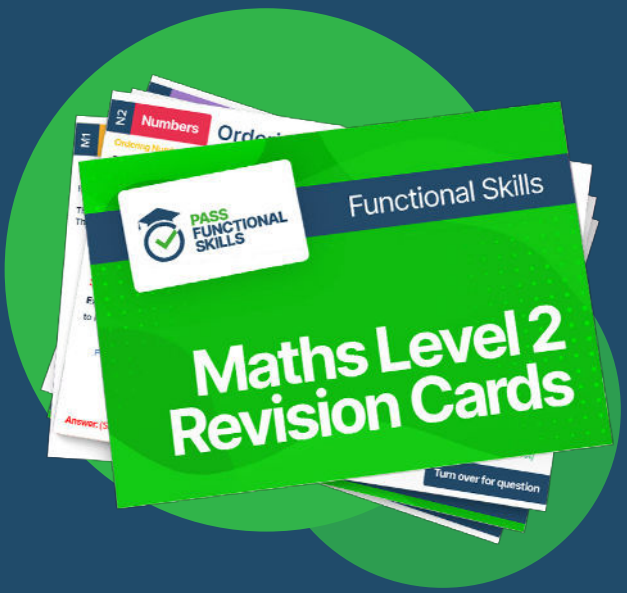

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Level 2 Revision Cards

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Practice Papers & Revision Cards

Functional Skills Maths
Level 2 Pocket Revision Guide

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Level 1 Functional Skills Mathematics
SAMPLE PAPER 3

City & Guilds
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Version: 1.1

Duration: 1 hour 20 minutes
Total marks: 45

SECTION 2 – CALCULATOR PERMITTED

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Last

Candidate enrolment number

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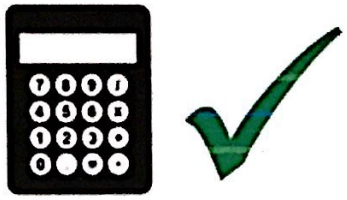

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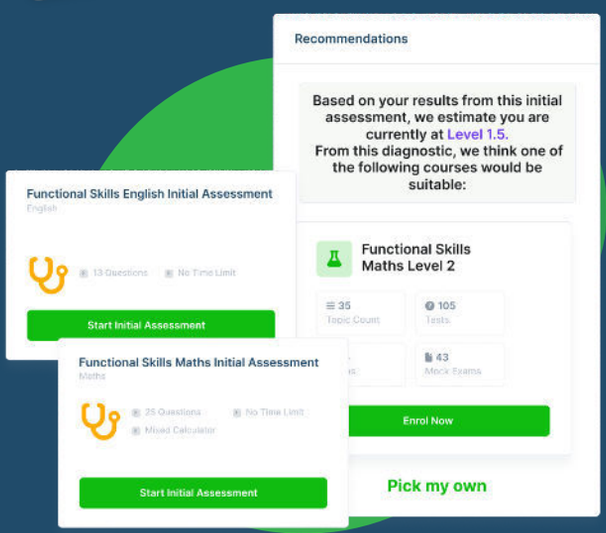

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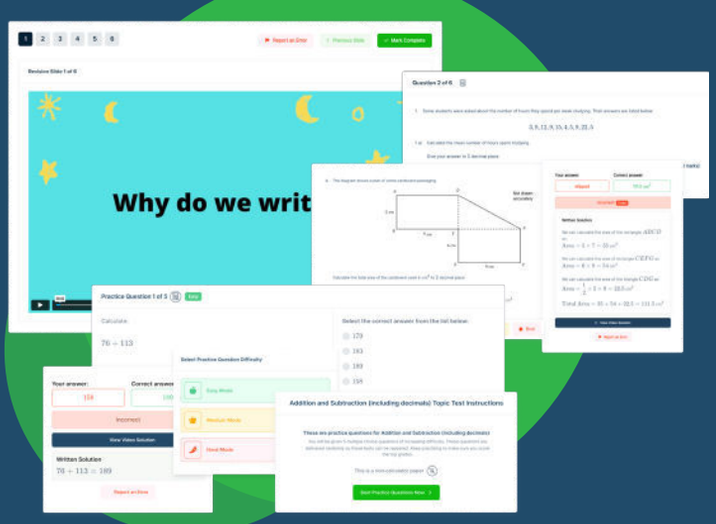

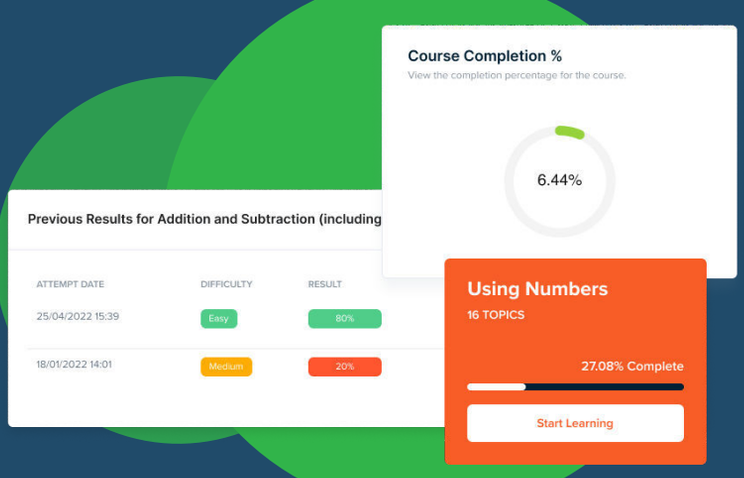

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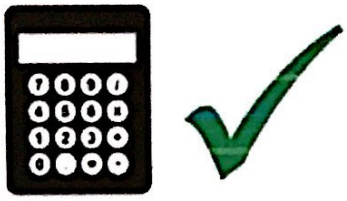


Q1

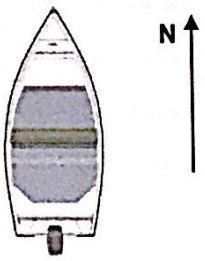
What is 10% of £68.50?

£ 6.85

(1 mark)

Q2

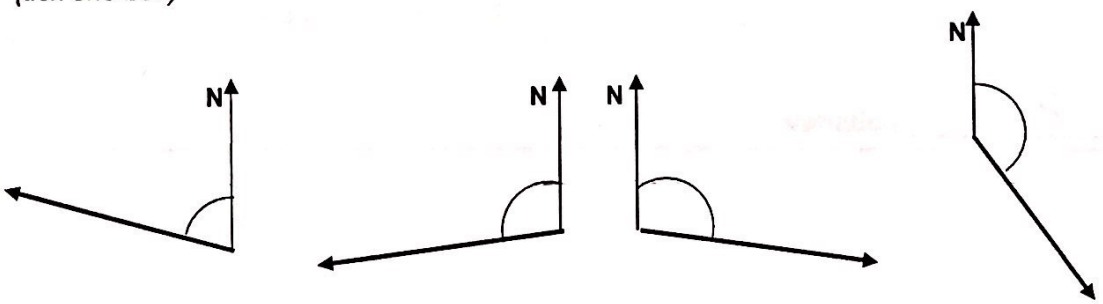
A boat is sailing North.



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

$32 - 7 = 25$

Smallest -7

Largest -32

Variation 25 **metres**

(1 mark)

Q4

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

$2500 \times 0.15 = 375$

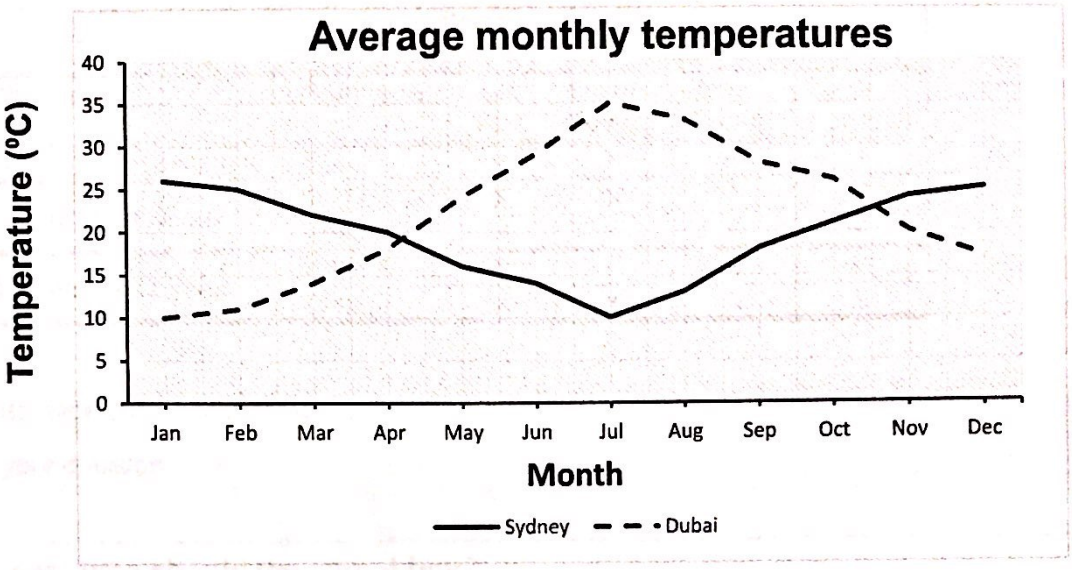
£ 375

(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?



25 °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

14g is unrealistically small for a bag.

(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?

Toddler B

Explanation

36 months is 3 years so Toddler A or Toddler B.
Toddler A is not front facing.
Must choose toddler B.

(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	Dave
Day 5	Dave	Day 13	Sue
Day 6	Dave	Day 14	Sue
Day 7	Dave	Day 15	Sue
Day 8	Dave	Day 16	Dave

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

Complete the rota

Show your working

12 Dave and 4 Sue needed.
10 Dave and 1 Sue already worked.
Add 2 Dave and 3 Sue.

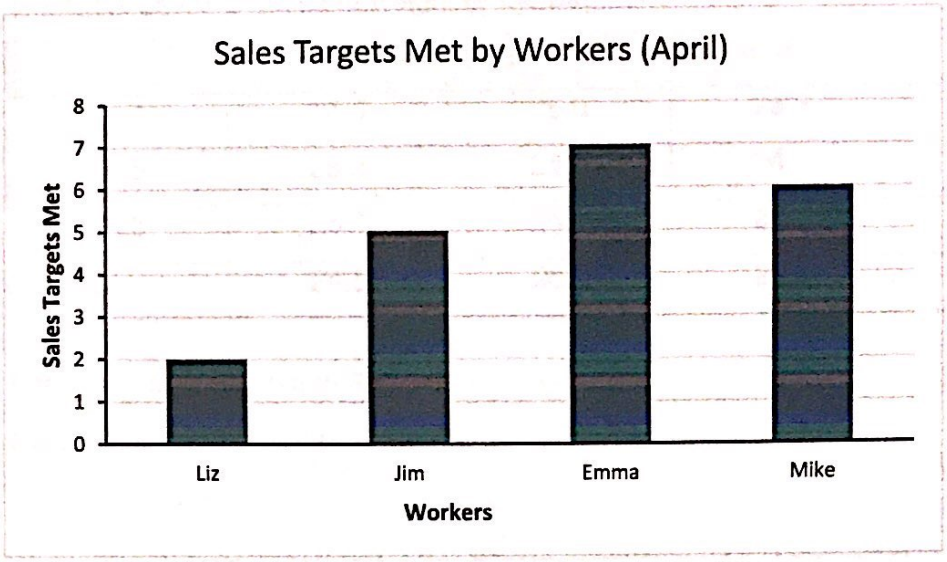
(3 marks)

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?

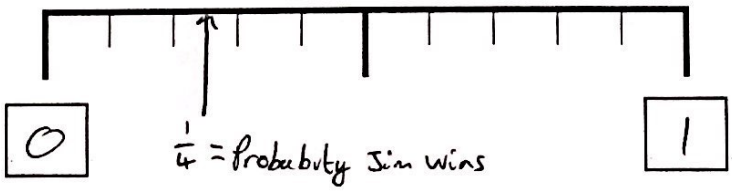
Complete the probability diagram below to show your answer.

Show your working

Jim has 5

Total $2+5+7+6=20$.

Probability $= \frac{5}{20} = \frac{1}{4}$



(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

Weight	No.
24.0-24.9	8
25.0-25.9	10
26.0-26.9	2

Comment

40 % of the bags were underweight.

(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

1.5km = 1500m.

1500 ÷ 50 = 30 lengths.

33 ÷ 30 = 1.1 minutes = 1'6"

__1__ **minutes** __6__ **seconds**

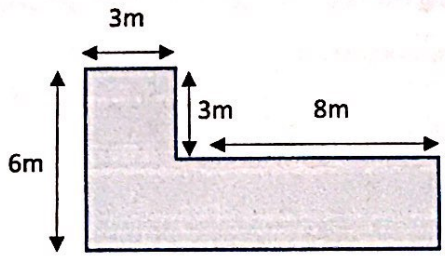
(4 marks)

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 $14m^2$



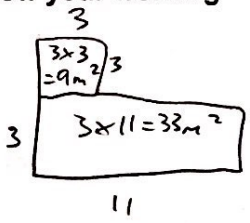
Sketch of driveway

Not to scale

What is the area of his driveway?

How many bags of gravel must he buy?

Show your working



$42m^2$ overall.

$42 \div 14 = 3$

Area of driveway 42 **m^2**

Number of bags of gravel 3

(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

A average = $\frac{7.2+6.8+7.6+8.7+7.4+6.8+8.0}{7}$

= 7.5 km

B average = $\frac{7.9+7.3+5.8+7.6+6.9}{5}$ = 7.1 km.

A variation = 1.9 km B variation = 2.1 km.

Which player should the manager choose?

(tick one box)

(Player A) **Player B**

Comment about average

Player A has a better average distance covered than player B.

Comment about variation

Player A has a lower variation than player B, so will be more consistent.

(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

Member :
$20 \times 12 + 16 \times 12 + 15 + 95 \times 0.8 = £614$.

Non-member :
$8.50 \times 26 + 15 + 95 = £662$.

Decision *(tick one box)*

Member ☑ **Non-member** ☐

Explanation

Member is £48 cheaper.

(6 marks)

Q15

The owner of a trampoline park has a floor plan.

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

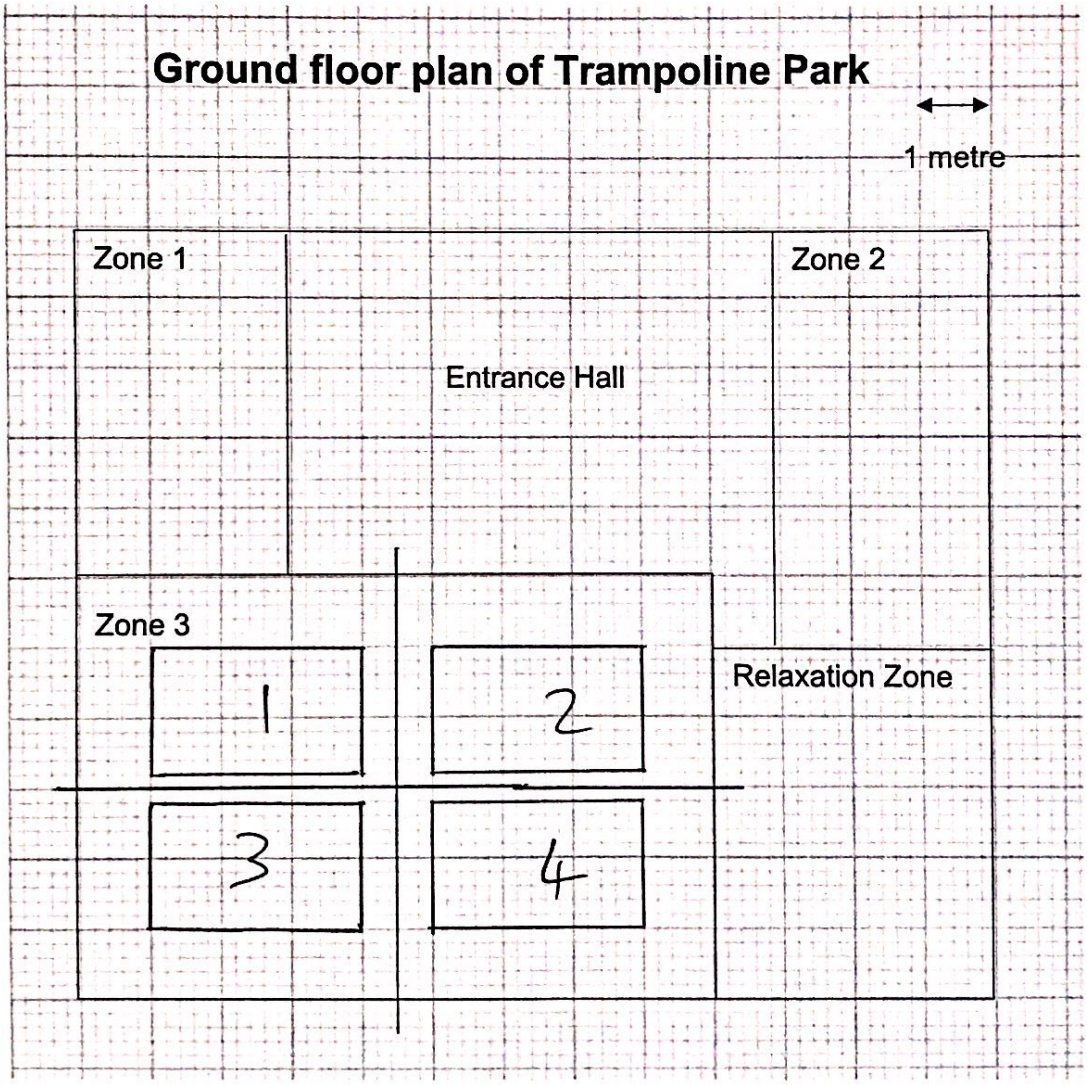
She needs a scale diagram to see where the trampolines will go.

Each trampoline measures 3 metres by 1.8 metres.

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

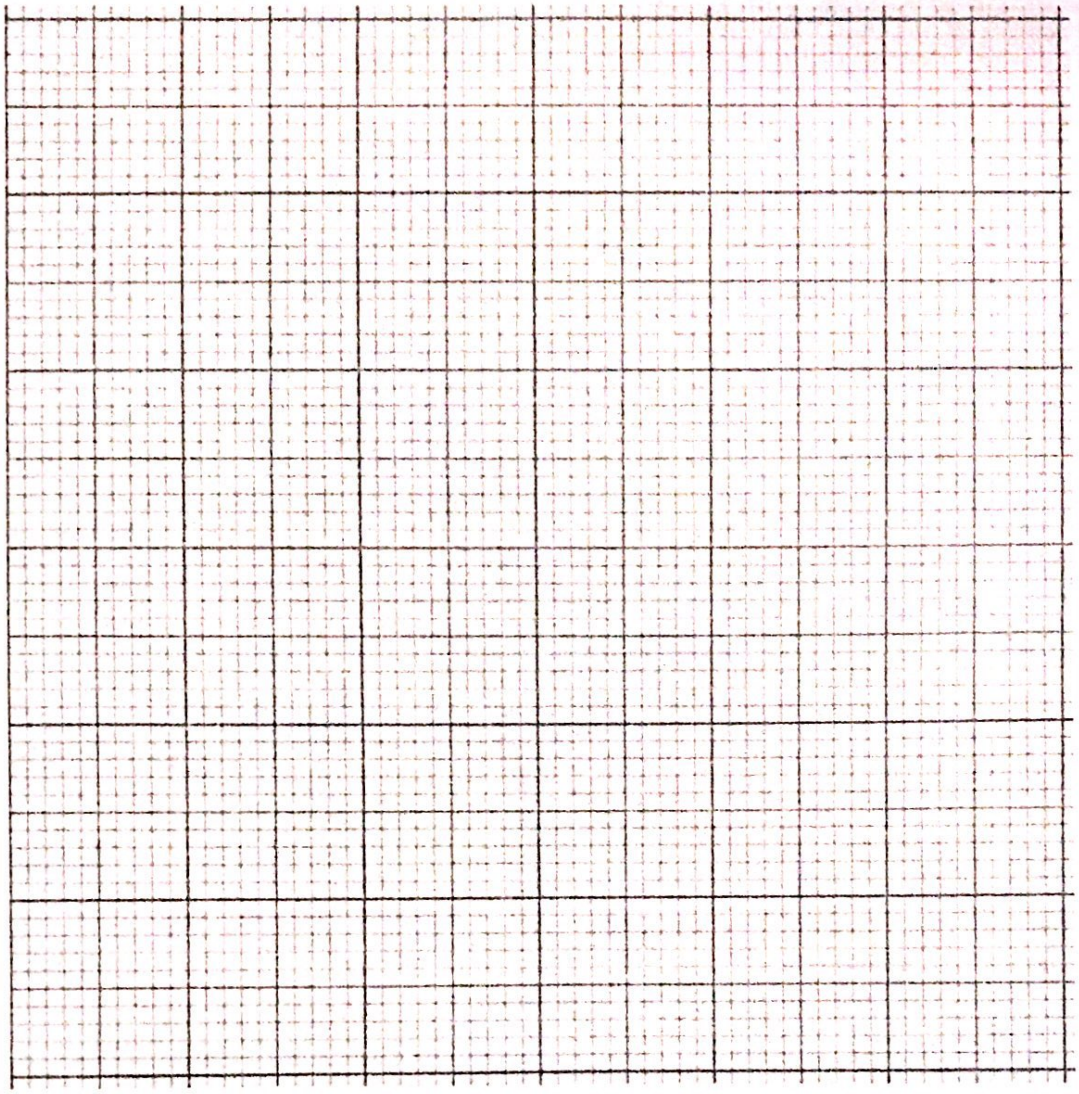
Complete the plan below to show the positions of the trampolines.

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

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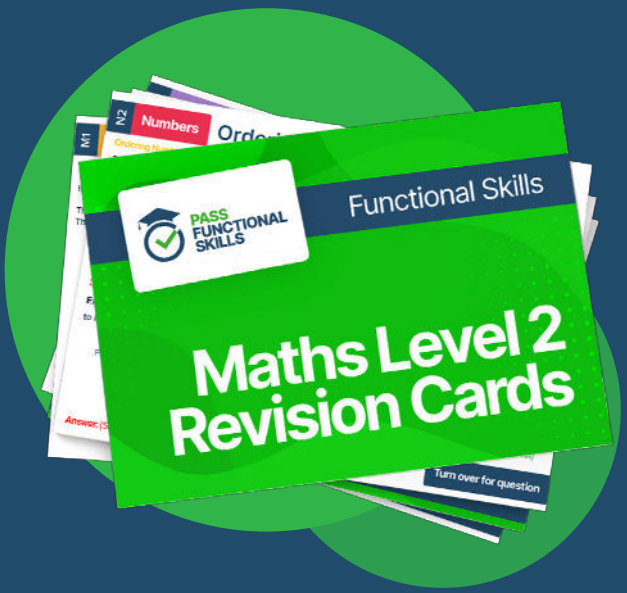
Level 2 Practice Papers



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