Sample Paper 4
Level 1 Functional Skills Mathematics

City & Guilds

Candidate Name (First, Middle, Last)

Candidate enrolment number DOB (DDMMYYYY)

Candidate signature and declaration*

Assessment date (DDMMYYYY) Centre number

Length of assessment:
1 hour 30 minutes

You should have the following for this assessment

- a pen with black or blue ink
- a pencil and eraser for graph work.
- a 30cm ruler.
- You may use a calculator.
- You may use a protractor.
- You may use a dictionary.

General instructions

- There are **3** tasks to complete.
- You should spend an equal amount of time on each task.
- Read through each task carefully.
- Show your working out. You may get marks for it.
- Check your calculations.
- Remember to put units on your answers.
- Write all working out and answers in this booklet.
- There are additional pages at the back of this booklet if you run out of space.

You should have the following for this assessment:

- A pen with black or blue ink
- A pencil and eraser which may be used for **diagram/graph work only**

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

Task 1 CD cases

There are **15** marks available for this task.

Introduction
This task is about selling CD cases.

You work on a market stall.
Your boss buys a big box of CD cases to split into smaller packs to sell.

1A
There are 300 CD cases in the big box.
Your boss wants you to make up 10 packs of 12 CD cases and put the rest into packs of 5.

How many packs of 5 CD cases can you make?

Show your working.

Number of packs of 5 CD cases

(2 marks)

1B
The big box of 300 CD cases costs £120.

How much money did it cost your boss for
- 5 CD cases
- 12 CD cases?

Show your working.

Pack size	5 CD cases	12 CD cases
Cost		

(3 marks)

1C
You will sell the packs for 75% more money than they cost, to make enough profit.

What price will you charge for each size of pack of CD cases with the profit?

Show your working

Pack size	5 CD cases	12 CD cases
Price		

(4 marks)

1D
What is the total amount of money you will get for all of the CD cases when you sell all of the packs?

Show your working

Total amount for all CD cases

(2 marks)

1E

You want to work out the total profit.

Draw a table to include the

- cost of the big box of CD cases
- total amount of money you will get for all of the CD cases
- total amount of profit from all of the CD cases.

(4 marks)

Task 2 Summer party

There are **15** marks available for this task.

Introduction

This task is about arranging entertainment for a party.

You work for a company that has a summer party for the workers' families.
You have a maximum budget of £150 to hire a bouncy castle and a giant game.

2A
A website has these bouncy castles to hire.

Type	For ages	Size		Cost for		
		length	width	half day	one day	two days
Mini bounce	3 years to 7 years	3.0m	3.5m	£40	£60	£115
Little bounce	3 years to 7 years	4.0m	4.0m	£50	£90	£155
Super bounce	3 years to adult	4.5m	4.0m	£70	£110	£185
Epic bounce	3 years to adult	5.0m	5.5m	£90	£150	£265

You want a bouncy castle for children and adults for one day.

Choose a suitable bouncy castle and give **two** reasons why.

Type of bouncy castle

Reasons

(2 marks)

2B

The hire company has a special offer on giant outdoor games.

Game	**Connect 4**	**Ludo**	**Twister**
Full price to hire	£35	£25	£15
Space on the grass	1.5m by 0.5m	2.5m by 2.5m	3.5m by 3.5m

Special offer
hire any game for
half price
when you hire a bouncy castle

Choose a game to hire.

What is the **total** cost to hire the bouncy castle and the giant game using the special offer?

How much money will you have left from your budget?

Show your working

Game

Total cost

Money left

(4 marks)

2C

You must put the bouncy castle and the game on grass.
There must be 1m of clear grass all around the bouncy castle and all around the game.
You must **not** put the bouncy castle under trees.

Draw the positions for the bouncy castle and the game on the scale plan on the **next page**.
Label your scale plan.

(7 marks)

Space for working

2D

You need to show a check of how you used your scale in **2C.**

Explain how you know one of the lines on your diagram is the correct scaled length.

Write your check here

(2 marks)

Cooking area
Scale
1 metre
Key
tree
path
grass

Task 3 Library computers

There are **15** marks available for this task.

Introduction
This task is about computers in a library.

Last year visitors to three local libraries complained that they had to wait too long to use a computer. The council gave each library an extra computer.

You work for the council in the library department. You want to see if the waiting times have improved. You ask the libraries to send you some information about waiting times last week.

Information about the time visitors waited to use a computer last week			
Library	**Nurton**	**Hamm**	**Dunston**
Total time (minutes)	715	900	570
Total number of visitors	55	45	30
Minimum time to wait (minutes)	9	5	3
Maximum time to wait (minutes)	17	29	28

3A
A member of the department wants to interview visitors, who used the computers last week. He chooses them at random.

What is the chance of him picking someone who has waited more than two minutes?
What the chance of him picking someone who has waited more than 30 minutes?

The chance (probability) of picking someone who has waited more than two minutes is

Certain	☐
Likely	☐
50/50 chance	☐
Unlikely	☐
No chance	☐

(Tick one box)

The chance (probability) of picking someone who has waited more than 30 minutes is

Certain	☐
Likely	☐
50/50 chance	☐
Unlikely	☐
No chance	☐

(Tick one box)

3B
What are the ranges of the times that visitors waited to use a computer in each library last week?

Show your working

Library	Nurton	Hamm	Dunston
Range			

(2 marks)

3C
Which library had the most consistent waiting times last week?

Explain your answer.

Name of library
Write your explanation here

(1 mark)

3D
What is the mean time that visitors waited to use a computer in each library last week?

Show your working

Library	Nurton	Hamm	Dunston
Mean time			

(3 marks)

3E
You look at information for the week **before** the libraries got the extra computers.

Information about the time visitors waited to use a computer the week before the libraries got their extra computers			
Library	**Nurton**	**Hamm**	**Dunston**
Mean time (in minutes)	16	15	19

Draw a chart to compare the means for the three libraries **before** and **after** they got the extra computers. **Use the graph paper below**.

(4 marks)

3F

Look at your chart of the mean waiting times before and after the libraries got the extra computers.

Which library has improved its waiting times the most? Explain your answer.

Name of Library

Write your explanation here

(1 mark)

3G

Choose one of your calculations to show a check.
Check it by a **different** method to the one you used originally.
You can use approximation, a reverse calculation or any other suitable different method.

The calculation I am going to check is in **3B** ☐ **3D** ☐

(Tick one box)

Write your check here

(2 marks)