

Functional Skills
 Mathematics Assessment
 Level 1

Learner name

Learner signature

Centre Number

Assessment Date

Question	Available marks	1 st Marker	2 nd Marker
Task 1 Q1a	1		
Q1b	1		
Q1c	3		
Q1d	3		
Q1e	4		
Q1f	6		
Q1g	6		
Q1h	5		
Task 2 Q1a	6		
Q1b	3		
Q1c	4		
Q1d	3		
Total	45		

Instructions to candidates

You may use a calculator.

You **will** need a pen, pencil and ruler.

You **may** need access to a 90° set square, a compass, and a protractor.

Use only blue or black ink. Pencil **must only** be used for drawing.

There are **2 tasks** in this assessment.

You must attempt ALL tasks.

Total marks available: **45**

You have **one hour and 30 minutes** to finish the assessment.



L1 M TBM KH 032018

Task 1

Luke manages a Builders Merchants.

He has 4 workers at the Builders Merchants.

Here are the workers and the hours they work.

Name	Hours worked each week
Gareth	20
John	37
Michelle	37
Khalid	20

Luke pays each worker £10 an hour.

1a) How much money does Luke pay the 4 workers **in total** for 1 week's work?

Show your working here

(1 mark)

1b) Show how you check your answer

(1 mark)

Luke sells building supplies including house bricks and breeze blocks.

He wants to stock 5 house bricks to each breeze block.

Here are the numbers of house bricks and breeze blocks in Luke's Builders Merchants.

Breeze blocks	House bricks
850	5100

1c) Does Luke have at least 5 house bricks for every breeze block in stock?

Show your working here

(3 marks)

Luke wants to know which type of pipe sells best.

He wants to make a data collection sheet to record this.

Luke sorts the pipes into 5 sizes and 3 types:

Types of Pipes

- Copper
- Plastic
- Clay.

Sizes

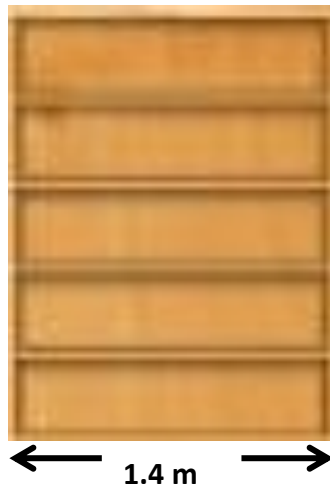
- 15mm
- 22mm
- 32mm
- 38mm
- 100mm

1d) Design a data collection sheet which fits Luke's purpose. Explain how to use it.

Show your answer here

(3 marks)

Luke uses a shelving unit to store boxes of screws.

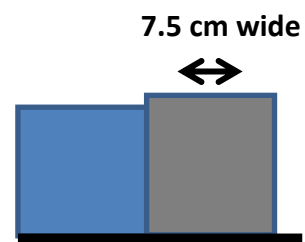


The shelving unit is 1.4 m wide and has 5 shelves.

Luke wants to work out how many boxes of screws he can fit on the shelving unit.

He assumes that each box is 7.5 cm wide.

Luke wants to put the boxes on each shelf as in the picture.



He wants to know how many boxes he can stack on the shelves in the new shelving unit.

1e) How many boxes can Luke stack in the new bookcase?

Show your working here

(4 marks)

Luke wants to have a staff meeting.

At the meeting he wants to talk about how much profit the Builders Merchants has made.

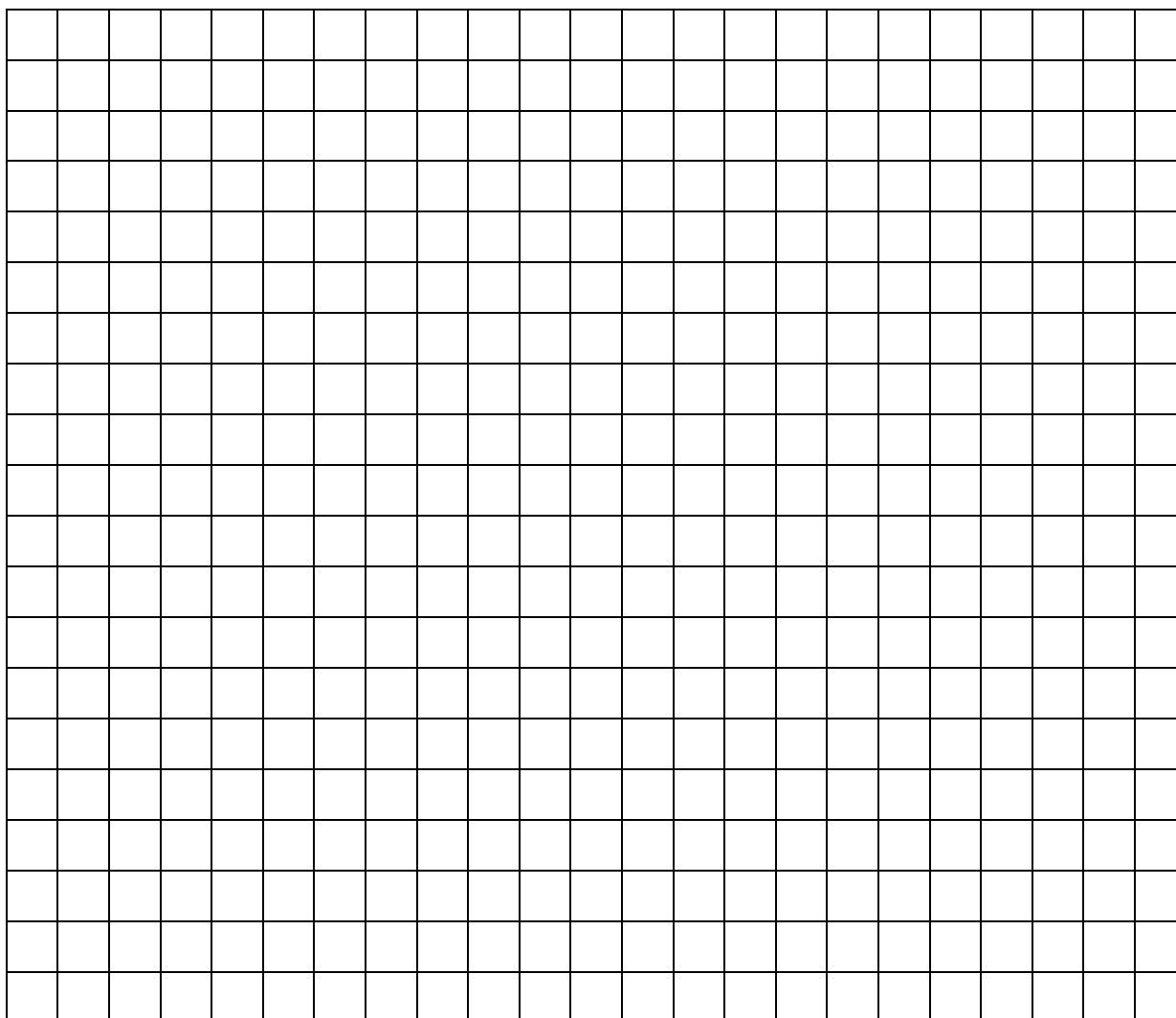
The table shows how much profit the Builders Merchants has made in the past five years.

Year	2013	2014	2015	2016	2017
Profit	£28000	£31 000	£38 000	£42 500	£39 000

Luke wants a graph or chart to represent this information.

1f) Draw a graph or chart for Luke to use at the meeting.

(6 marks)



The table shows how much profit the Builders Merchants has made in the past five years.

Year	2013	2014	2015	2016	2017
Profit	£28000	£31 000	£38 000	£42 500	£39 000

Luke says

'The mean average profit for the last 5 years is £34 500'
'The range of profit for the last 5 years is £17 500'

1g) Is Luke correct? Explain your findings.

Show your working here

(6 marks)

Shaq works at the Builders Merchants.
Shaq wants to buy skirting board and wood filler.



Recommended retail price £14



Recommended retail price £13

Shaq can buy the items from the Builders Merchants either

- using his staff discount of 20% off the recommended retail price
or
- using the customer offer.

Customer offer

Buy any items
Get the 2nd one half price

[cheapest item is half price]

Shaq cannot have staff discount as well as the customer offer.
Shaq wants to buy the 2 items for the least amount of money possible.

1h) Work out which offer Shaq should use.

Show your working here

(5 marks)

Task 2

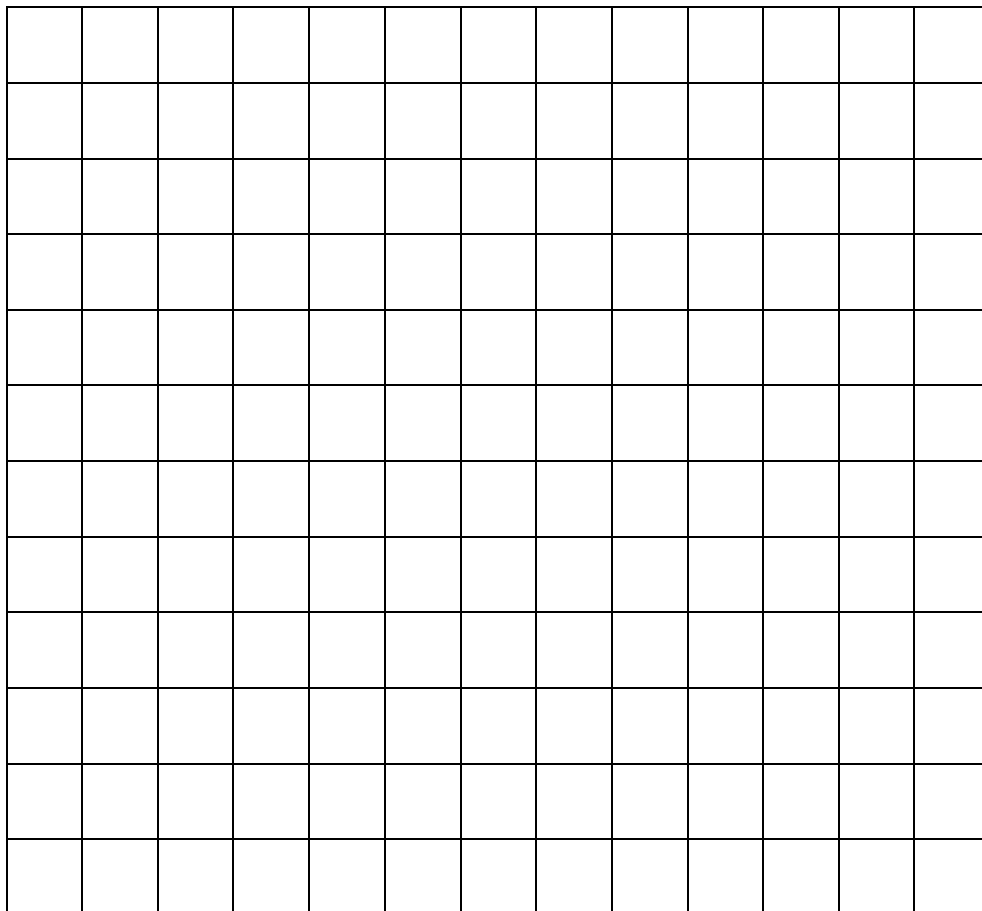
Luke wants to see if it is possible to fit these items into the space

- 2 pipe stands - each stand occupies a rectangle space 25cm by 150cm and is attached to a wall
- 4 blocks of bricks occupying a square space 1m by 1m

Luke makes sure that there is at least 25cm space around each block of bricks.

1a) Show on the plan the position of the pipe stands and blocks of bricks. Label each item clearly.

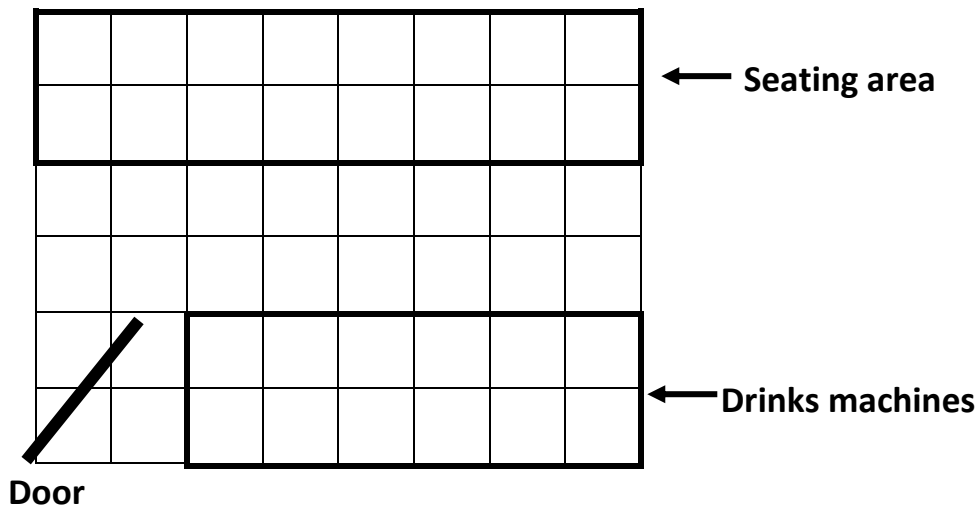
(6 marks)



Scale: Each square has sides of 25 cm (not to scale)

Luke has a customer waiting area with a drinks machines and seating.

The diagram below shows a plan of the room.



Scale: Each square has sides of 1 metre (not to scale)

1b) Luke wants to know what the size of the room is and the area of the drinks machines.

Show your working here

(3 marks)

Luke needs to write a delivery plan.

He writes some notes on what deliveries need to be made.

Deliveries
<i>Bricks – 1 and a half hours</i>
<i>Sand – 45 minutes</i>
<i>3 bags of Gravel – 25 minutes each</i>
<i>Lunch break – 30 minutes</i>
<i>Pipes – half an hour</i>

Luke thinks he must allow 4 hours for the deliveries.

1c) Is 4 hours enough time for the deliveries? Explain your answer.

Show your working here

(4 marks)

Luke wants to calculate the cost of next day delivery.

The customer wants an urgent delivery of slabs.

The customer does not want to spend more than £150 on the slabs and delivery.

Luke follows this formula to work out the cost of delivery.



The customer needs 60 slabs.

1d) Can the customer pay for the slabs and delivery for less than £150?

Show your working here

(3 marks)

END OF ASSESSMENT

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