



NCFE Level 1 Functional Skills Qualification in Mathematics (603/5055/6)

Paper number: P001255
Section B: Calculator Test



Time allowed: 1 hour 30 minutes

Learner instructions

- Answer **all** questions.
- Read each question carefully.
- Write your answers in the spaces provided.
- Show your working, as marks may be awarded for working.
- State units in your answers, where appropriate.
- Check your work.

Learner information

- Section B contains **Activities 2, 3 and 4**.
- The maximum mark for this section is **45**.
- The marks available for **each** question are shown in brackets.

Resources

You will need a:

- pen, with black or blue ink
- pencil and eraser
- 30 cm ruler
- protractor
- calculator.

If extra pages are used, please make sure your name and centre name are on them and they are securely fastened to this booklet.

Please complete the details below clearly and in BLOCK CAPITALS.

Learner name _____

Centre name _____

Learner number

Centre number

Do not turn over until the invigilator tells you to do so.



FUNCTIONAL SKILLS ONLINE COURSES

- ✓ Your answers are analysed to determine your Current Level
- ✓ Suggested courses for you to enrol on based on your calculated level
- ✓ Always know the level you are currently working at
- ✓ Determine when you are ready to sit your exam

Functional Skills English Initial Assessment
English
13 Questions | No Time Limit
Start Initial Assessment

Functional Skills Maths Initial Assessment
Maths
25 Questions | Mixed Calculator | No Time Limit
Start Initial Assessment

Recommendations
Based on your results from this initial assessment, we estimate you are currently at **Level 1.5**.
From this diagnostic, we think one of the following courses would be suitable:

Functional Skills Maths Level 2
35 Topic Count | 105 Tests
43 Mock Exams
Enrol Now

Pick my own

- ✓ Explainer videos on every topic
- ✓ Quick-fire style multiple choice questions
- ✓ Test your knowledge with exam-style questions
- ✓ Written solutions for all questions

Why do we write...

Practice Question 1 of 5
Calculation
 $76 + 113 = 189$

Question 2 of 5
Select the correct answer from the list below:
129
183
189
154

Written Solution
 $76 + 113 = 189$

Course Completion %
View the completion percentage for the course.

6.44%

Using Numbers
16 TOPICS
27.08% Complete

Start Learning

Previous Results for Addition and Subtraction (including

ATTEMPT DATE	DIFFICULTY	RESULT
25/04/2022 15:39	Easy	80%
18/01/2022 14:01	Medium	20%

- ✓ See your progress through as you progress through each topic area
- ✓ Get your average scores for practice questions, topic tests and mock exams
- ✓ View all practice question, topic test and mock exam attempts over time
- ✓ View historical attempts to analyse your progress over time

Or visit
passfunctionalskills.co.uk

Activity 2: Hens and eggs

2 (a) Sadie wants to keep hens in her garden.

She finds this information about some different types of hens.

Type of hen	Numbers of eggs per year
Buff Orpington	280
Rhode Island Red	260
Leghorn	270
Plymouth Rock	120
Speckled Sussex	250

Calculate the range in the numbers of eggs per year.

[1 mark]

$$280 - 120 = 160$$

Your answer:

160

Please turn over

2 (b) Sadie sees these hen houses.


The Majestic



£605

30% discount

The Classic



£636

$\frac{1}{3}$ discount

Which hen house will be cheaper after the discount?

Show how you decide.

[4 marks]

The majestic:

$$605 \div 100 \times 70 = £423.50$$

The classic:

$$636 \div 3 \times 2 = £424$$

The majestic will be cheaper

Your answer:

The majestic

- 2 (c) Sadie wants to put fencing around an area of grass where the hens can run about safely.

She has 22 m of fencing.

She reads that the minimum area for each hen to run about safely is 1.5 m^2

Sadie decides to make a square area of grass.

What is the greatest number of hens she could keep?

[4 marks]

$$22 \div 4 = 5.5 \text{ m per side of square}$$

$$\text{Area} = 5.5 \times 5.5 = 30.25 \text{ m}^2$$

$$30.25 \div 1.5 = 20.166\dots$$

So she can keep 20 hens

Your answer:

20

hens

Please turn over

2 (d) Sadie buys 10 hens.

She reads that, if the mean number of eggs per hen per year is 250 or more, then the hens are happy and healthy.

Sadie records how many eggs her 10 hens lay in the first 6 weeks.

The table shows her results:

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
46	48	55	43	52	53

Using these figures, Sadie thinks that her hens are happy and healthy.

Is Sadie correct?

Show how you decide.

[4 marks]

$$\begin{aligned} \text{Mean per week} &= \frac{46 + 48 + 55 + 43 + 52 + 53}{6} \\ &= 49.5 \end{aligned}$$

$$\begin{aligned} \text{Mean per week per hen} &= 49.5 \div 10 \\ &= 4.95 \end{aligned}$$

$$\begin{aligned} \text{Mean per year per hen} &= 4.95 \times 52 \\ &= 257.4 \end{aligned}$$

So yes, Sadie is correct

Your answer:

Yes .

- 2 (e) In a recent report, it was estimated that 750 000 people keep hens.

Write 750 000 in words.

[1 mark]

Your answer:

Seven hundred and fifty thousand

- 2 (f) 53% of the eggs produced in the UK in 2018 were free range.

Write 53% as a fraction.

[1 mark]

Your answer:

$\frac{53}{100}$

[Total marks: 15]

Please turn over

Activity 3: Decorating

3 (a) Chester is decorating some of the rooms in his house.

He needs to know the area of a window.

The window measures 3 m wide and 1.75 m high.

Round 1.75 to the nearest whole number and use this value to estimate the answer to 3×1.75

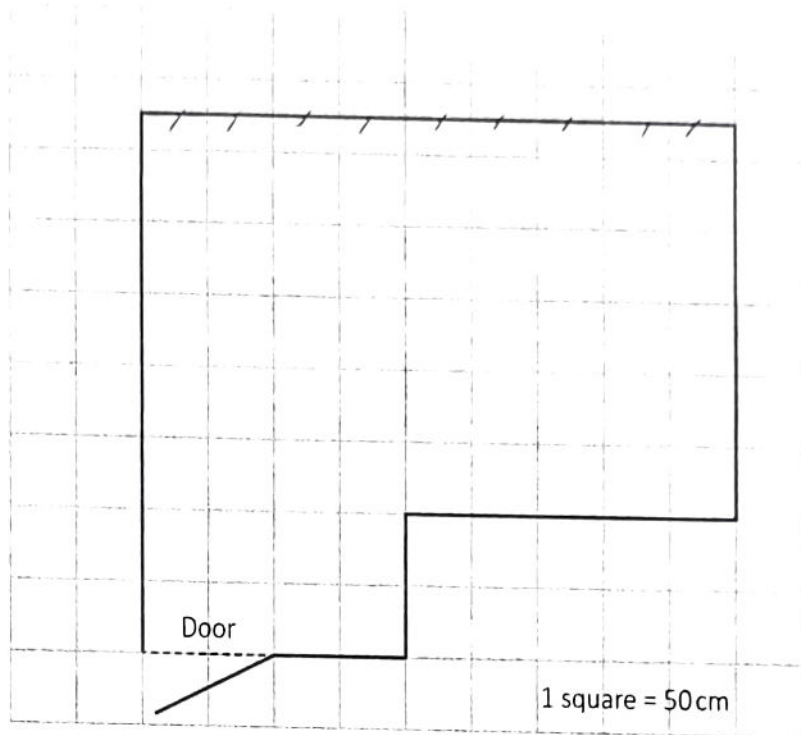
[1 mark]

$$3 \times 2 = 6$$

Your answer:

6

- 3 (b) Chester makes this scale plan of one of the rooms.



What is the actual length of the longest wall in m?

[2 marks]

$$9 \times 50 = 450 \text{ cm}$$

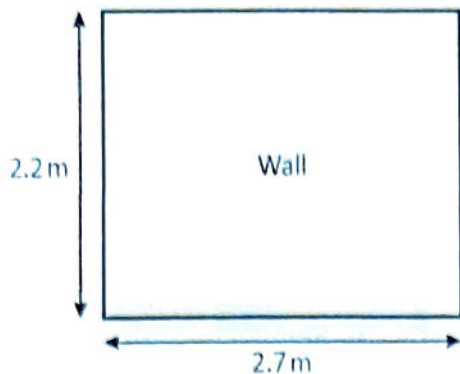
$$450 \div 100 = 4.5 \text{ m}$$

Your answer:

4.5

m

3 (c) In a different room, one of the walls is 2.7 m long and 2.2 m high.



Not drawn accurately

Chester wants to put wallpaper on this wall.

He uses wallpaper that is 0.5 m wide and 12.1 m long.

Chester will hang the wallpaper vertically with no overlaps. Each piece will go from ceiling to floor with no joins.

How many rolls of wallpaper will Chester need to buy?

You **must** show your working.

[3 marks]

$$2.7 \div 0.5 = 5.4$$

$$12.1 \div 2.2 = 5.5$$

So Chester will need 2 rolls.

Your answer:

2 rolls

3 (d) Chester will paint the other walls and the ceiling.

He finds the colour he likes in two different sizes.



Chester thinks the larger tin is better value for money.

Is Chester correct?

Show how you decide.

[3 marks]

$$700 \text{ ml} = 0.7 \text{ L}$$

$$10.15 \div 0.7 = \text{£}14.50$$

$$21.21 \div 1.5 = \text{£}14.14$$

Yes, he is correct.

Your answer:

Yes.

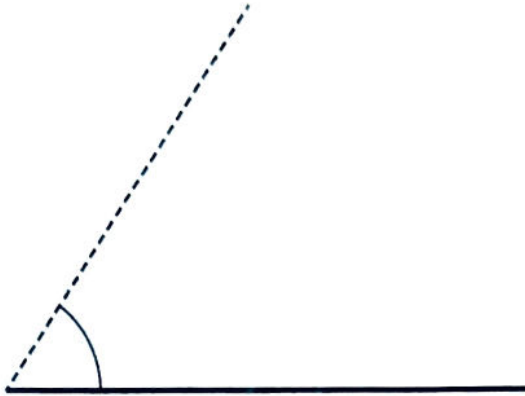
Please turn over

3 (e) Chester is going to lay tiles on the floor.

He wants to lay them at an angle.



He marks the angles on the tile before he cuts it, as shown below.



What is the angle he has marked?

[1 mark]

Your answer:

55°

3 (f) Chester needs 240 tiles.

He buys 10% more tiles in case some of the tiles break.

He cuts $\frac{3}{8}$ of the tiles he buys.

How many tiles does he cut?

[3 marks]

$$10\% \text{ increase} = 1.1$$

$$240 \times 1.1 = 264$$

$$264 \div 8 \times 3 = 99 \text{ tiles}$$

Your answer:

99 tiles

Please turn over

3 (g) Chester buys a pack of sandpaper sheets with a mixture of grades.

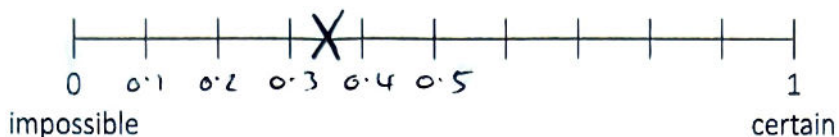
The pack contains 12 coarse grade, seven medium grade and one fine grade sheets.

Chester takes one sheet out at random.

What is the probability that the sheet Chester picks is medium grade?

Mark the probability on the scale below.

[2 marks]



$$\frac{7}{12+7+1} = \frac{7}{20} = 0.35$$

[Total marks: 15]

Activity 4: Football

4 (a) Every year, Shaz arranges a football tournament to raise money for charity.

Last year she raised £175

This year her target is to raise 25% more than last year.

What is £175 increased by 25%?

[2 marks]

$$175 \times 1.25 = £218.75$$

Your answer:

£218.75

Please turn over

4 (b) Shaz will share the money she raises between three charities.

She gives a local hospice $\frac{2}{5}$ of the money.

She gives Save the Children $\frac{1}{4}$ of the money.

She gives Age Concern $\frac{7}{20}$ of the money.

Which charity will get the most money?

Show how you decide.

[2 marks]

$$\frac{2}{5} = 0.40$$

$$\frac{1}{4} = 0.25$$

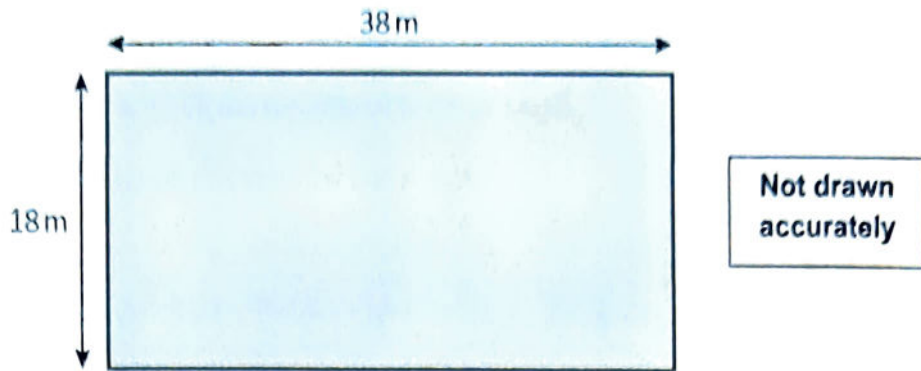
$$\frac{7}{20} = 0.35$$

local hospice will get the most money

Your answer:

local hospice.

- 4 (c) Before the first match starts, the perimeter of the football pitch needs to be marked out.



Calculate the perimeter of the pitch.

[1 mark]

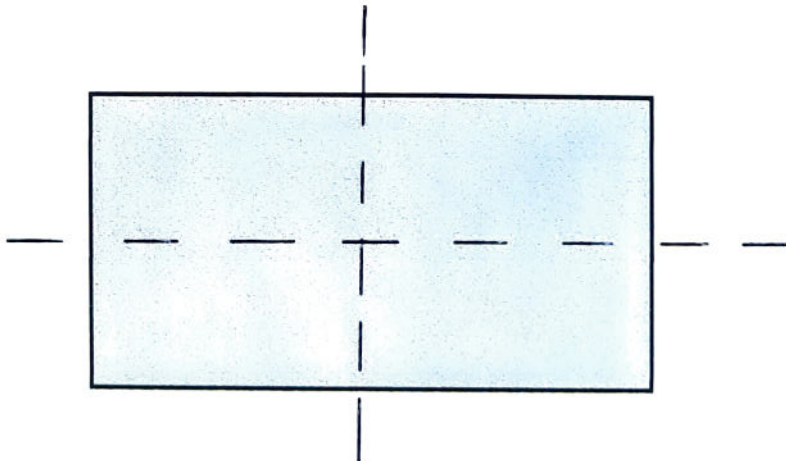
$$18 + 18 + 38 + 38 = 112 \text{ m}$$

Your answer:

112 m

- 4 (d) Shaz needs to mark out the centre spot of the rectangular football pitch. She uses the lines of symmetry and marks where they meet. Draw the lines of symmetry on the diagram below.

[1 mark]



Please turn over

4 (e) There will be six matches in total.

Each match lasts 20 minutes.

There is a five minute gap between each match.

Shaz wants to have the last match finish at 14:10

What time should she start the first match?

[3 marks]

$$6 \times 20 = 120 \text{ minutes}$$

$$5 \times 5 = 25 \text{ minutes}$$

$$\text{Total} = 120 + 25 = 145 \text{ minutes}$$

$$= 2 \text{ hours } 25 \text{ minutes}$$

$$\rightarrow 11:45$$

Your answer:

11:45

4 (f) These are the scores of the football matches:

Match	Team	Score		Team
1	A	4	5	B
2	C	3	0	D
3	A	4	4	C
4	D	7	8	B
5	A	0	2	D
6	C	3	1	B

Teams get:

- 2 points if they win
- 1 point each if they draw (when both teams score the same)
- 0 points if they lose.

Complete the table below.

[2 marks]

Position	Team	Points
1 st	C	5
2 nd	B	4
3 rd	D	2
4 th	A	1

Please turn over

4 (g) Shaz buys drinks for the players and spectators.

Each of the four teams will have six players.

She estimates there will be 50 spectators in total.

Shaz allows 1.2 litres of drink per player and 300 ml of drink per spectator.

The drink is sold in 2.5 litre bottles.

How many bottles will Shaz need to buy?

[4 marks]

$$300 \text{ ml} = 0.3 \text{ litres}$$

$$4 \times 6 = 24 \text{ players}$$

~~300 ml = 0.3 litres~~

~~4 x 6 = 24 players~~

$$24 \times 1.2 = 28.8 \text{ litres for players}$$

$$50 \times 0.3 = 15 \text{ litres for spectators}$$

$$28.8 + 15 = 43.8 \text{ litres total}$$

$$43.8 \div 2.5 = 17.52$$

so she will need to buy
18 bottles

Your answer:

18

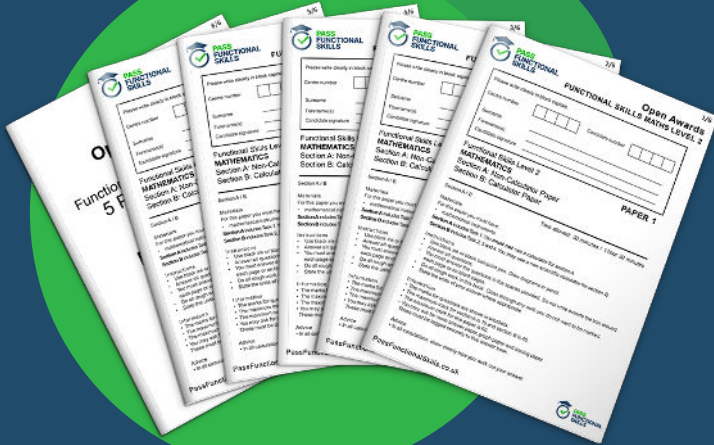
bottles

[Total marks: 15]

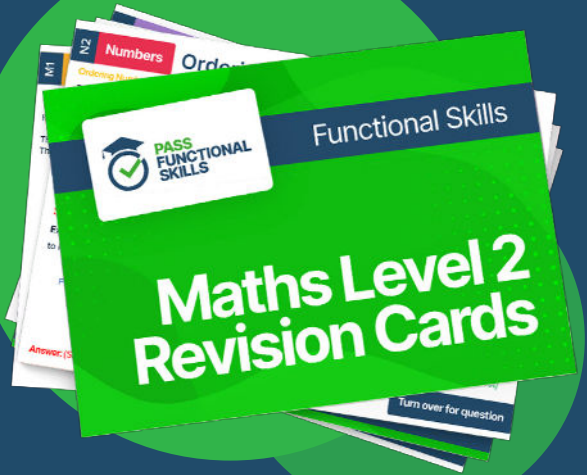
This is the end of the assessment.



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