



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

Paper number: P001254  
Section B: Calculator Test



**Assessment window:** Monday 9 December 2019 – Friday 13 December 2019  
**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 \_\_\_\_\_

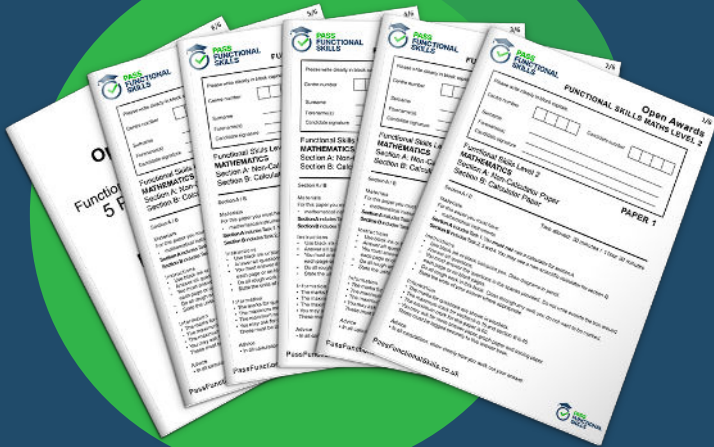
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Centre number

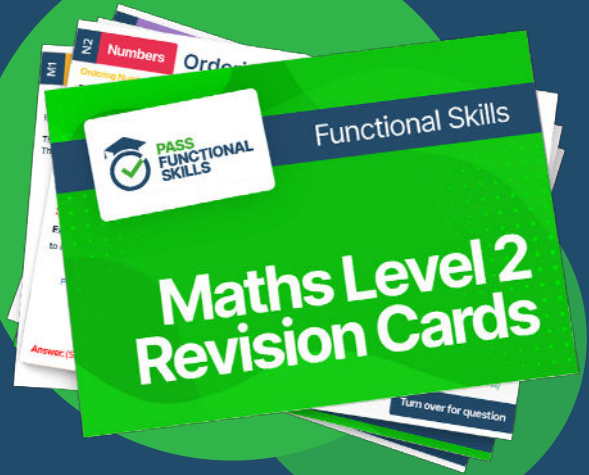
**Do not turn over until the invigilator tells you to do so.**



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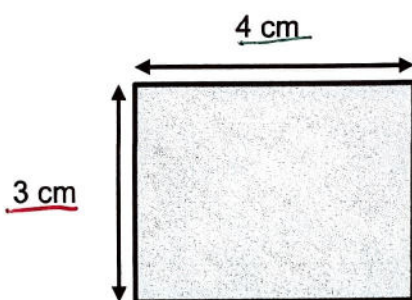
**Activity 2: Healthy-eating café**

2 (a) John is opening a healthy-eating café.

He looks for a property with a seating area for 20 customers.

This is a scale plan of the seating area in one property he finds.

The drawing has a scale of 1 centimetre (cm): 150 cm



The recommended maximum number of customers in a café is the seating area ( $\text{m}^2$ ) divided by 1.5

Is this property suitable for 20 customers?  
Show how you decide.

[5 marks]

$$3 \times 150 = 450 \text{ cm} = 4.5 \text{ m}$$

$$4 \times 150 = 600 \text{ cm} = 6 \text{ m}$$

$$4.5 \times 6 = 27 \text{ m}^2$$

$$27 \div 1.5 = 18 < 20$$

No.

Your answer:

No.

Please turn over



**2 (b)** Another property has a kitchen that has an area of 7 metres squared.

What is  $7^2$ ?

[1 mark]

$$7^2 = 49$$

Your answer:

49

**2 (c)** John wants his menu to offer healthy food.

He reads that six hundred and seventeen thousand people went to hospital last year with illnesses caused by a poor diet.

What is six hundred and seventeen thousand in numbers?

[1 mark]

Your answer:

617000

2 (d) John buys food in preparation for his opening day.

| Ingredients      | Price per item | Number of items  | Total price per ingredient               |
|------------------|----------------|------------------|--|
| Cabbage          | 64p            | 5                | $\pounds 0.64 \times 5 = \pounds 3.20$   |
| Pack of carrots  | 30p            | 20               | $\pounds 0.30 \times 20 = \pounds 6.00$  |
| Pack of tomatoes | £1.25          | 11               | $\pounds 1.25 \times 11 = \pounds 13.75$ |
| Cucumbers        | 50p            | 9                | $\pounds 0.50 \times 9 = \pounds 4.50$   |
| Pack of onions   | £1.00          | 15               | $\pounds 1.00 \times 15 = \pounds 15.00$ |
|                  |                | <b>Total (£)</b> | <b>£42.45</b>                            |

Complete the table to show how much has John spent.

[2 marks]

Please turn over

2 (e) John fills a fruit bowl with 6 apples, 4 plums, 5 oranges and 3 pears.

The first customer chooses a piece of fruit at random.

What is the probability that they choose a pear?

[2 marks]

$$6 + 4 + 5 + 3 = 18$$

$$\frac{3}{18} = \frac{1}{6}$$

Your answer:

$$\frac{1}{6}$$

2 (f) John looks at the bills from all the customers.

The range of amounts spent is £22.46

The largest bill was £24.56

What was the smallest bill?

[2 marks]

$$£24.56 - £22.46 = £2.10$$

Your answer:

$$£ 2.10$$

2 (g) John asks his customers to rate the café.

- The customers give four times as many **good** ratings as **excellent** ratings.
- The customers also give three times as many **excellent** ratings as **satisfactory** ratings.

60 customers rated the café as good.

How many customers rated the café as satisfactory?

[2 marks]

$$\begin{aligned} \text{Good} &= 60 \\ \text{Excellent} &= 60 \div 4 = 15 \\ \text{Satisfactory} &= 15 \div 3 = 5 \end{aligned}$$

Your answer:

5

customers

[Total marks: 15]

Please turn over

### Activity 3: Go-karting

3 (a) Hamid organises a go-karting party for himself and five friends.

The cost is £29.95 per person.

He uses rounding to estimate the cost for the whole group.

How much is the estimated cost?

[2 marks]

$$\begin{aligned} \text{£}29.95 &\approx \text{£}30 \\ \text{£}30 \times 6 &= \text{£}180 \end{aligned}$$

Your answer:

£ 180

3 (b) Hamid needs to book transport.

A small minibus will cost £45

He has a voucher for 5% off.

How much will the minibus cost Hamid?

[2 marks]

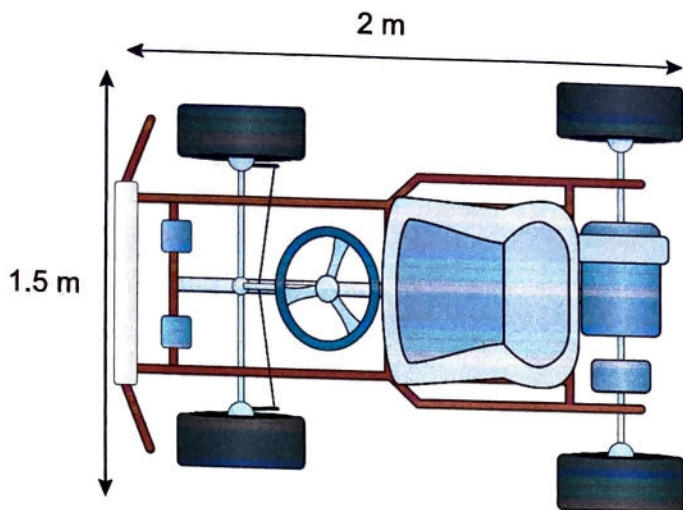
$$\text{£}45 \times 0.95 = \text{£}42.75$$

Your answer:

£ 42.75



- 3 (c) The safety instructions show a plan view of the go-kart.



Hamid says that the go-kart is 1.5 m high, 2 m long and 0.6 m wide.

Is Hamid correct?

Explain your answer.

[1 mark]

No.  
The go-kart is 1.5m wide.

Please turn over

- 3 (d) This table shows the times Hamid and two of his friends take to complete their first lap.

| Person | Time in seconds |
|--------|-----------------|
| Hamid  | 39.041          |
| Jane   | 39.3            |
| Ikrah  | 39.12           |

Write these times in order of fastest to slowest.

[1 mark]

Fastest 39.041 39.12 39.3 Slowest

- 3 (e) Which person had the fastest lap?

[1 mark]

Your answer:

Hamid

3 (f) Hamid looks at the times on the leader board for that day.

The times are in seconds.

| <b>Leader board</b>   |              |
|-----------------------|--------------|
| <b>1<sup>st</sup></b> | <b>26.52</b> |
| <b>2<sup>nd</sup></b> | <b>27.5</b>  |
| <b>3<sup>rd</sup></b> | <b>28.9</b>  |
| <b>4<sup>th</sup></b> | <b>29.82</b> |
| <b>5<sup>th</sup></b> | <b>30.18</b> |
| <b>6<sup>th</sup></b> | <b>31.2</b>  |
| <b>7<sup>th</sup></b> | <b>31.4</b>  |

Calculate the mean time.

[2 marks]

$$\frac{26.52 + 27.5 + 28.9 + 29.82 + 30.18 + 31.2 + 31.4}{7} = 29.36$$

Your answer:

29.36 seconds

Please turn over

3 (g) Here are people's lap times in seconds over the last week:

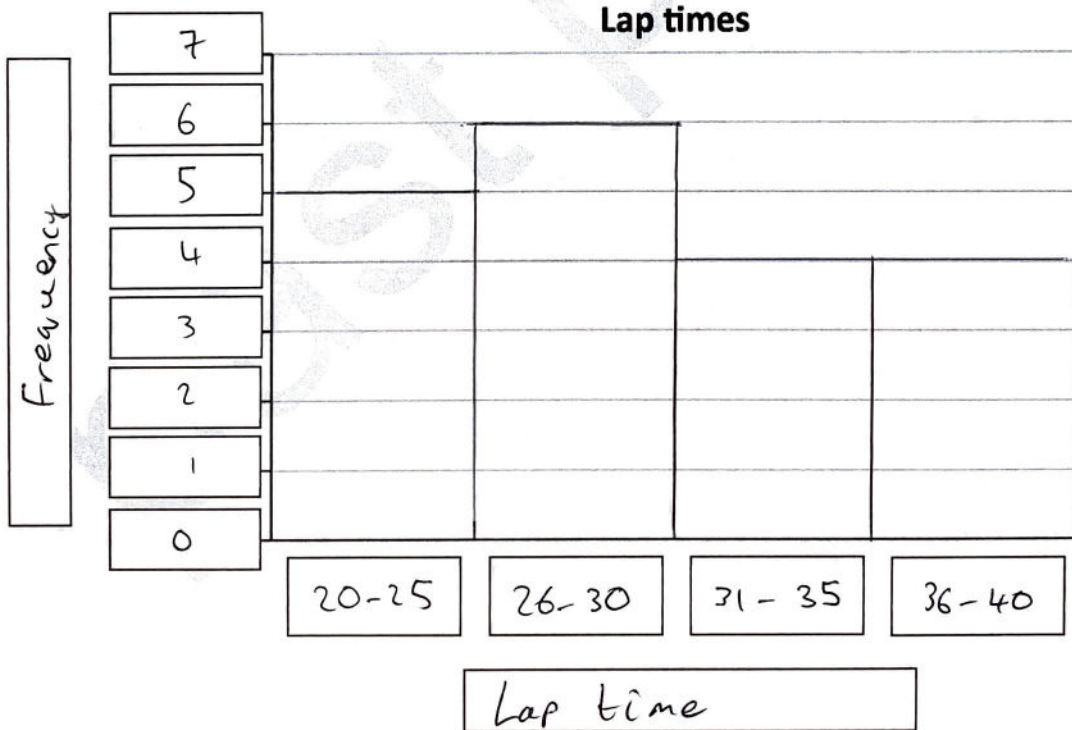
21 34 27 36 27 38 22 30 40 21  
 29 32 20 26 37 31 22 33 27

Using the lap times complete this frequency table:

| Lap time in seconds | Frequency of people |
|---------------------|---------------------|
| 20 – 25             | 5                   |
| 26 – 30             | 6                   |
| 31 – 35             | 4                   |
| 36 – 40             | 4                   |

Plot your results on this bar chart.

[4 marks]





3 (h) The friends go to lunch after they have raced.

Bethany has a voucher giving her 35% off.

Ikrah has a voucher for  $\frac{2}{5}$  off.

Who has the better discount?

Show how you decide.

[2 marks]

$$\frac{2}{5} = 40\%$$

$$35\% < 40\%$$

Your answer:

Ikrah

[Total marks: 15]

Please turn over

**Activity 4:      Childcare course**

**4 (a)**      Natalie teaches a childcare course.

She is planning a trip with 16 students.

They have volunteered to work for two weeks abroad.

They need to raise £2000 per student to pay for the trip.

They have already raised  $\frac{7}{8}$  of the money needed.

How much money have they raised so far?

**[3 marks]**

$$£2000 \times 16 = £32000$$

$$£32000 \times \frac{7}{8} = £28000$$

Your answer:

£ 28000

**4 (b)**      They have one eighth left to raise.

Write one eighth in figures.

**[1 mark]**

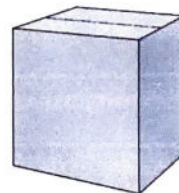
Your answer:

$\frac{1}{8}$

4 (c) Natalie packs children's clothes into boxes.

Each box is a cube with side lengths of 50 cm

The clothes weigh 350 grams (g) per 500 cm<sup>3</sup>



Calculate the weight of the clothes in each box when the box is full.

Give your answer in kg

[4 marks]

$$\begin{aligned}50 \times 50 \times 50 &= 125000 \text{ cm}^3 \\125000 \div 500 &= 250 \\250 \times 350 &= 87500 \text{ g} \\87500 \div 1000 &= 87.5 \text{ kg}\end{aligned}$$

Your answer:

87.5 kg

Please turn over

- 4 (d) When the group get on the plane the pilot announces that the temperature is 10 °C at their destination.

It is -2 °C in the UK.

What is the difference in temperature from the UK to their destination?

[1 mark]

$$10 - -2 = 10 + 2 = 12$$

Your answer:

12 °C



4 (e) The volunteers are going to help children in a home.

The ratio of boys to girls in the home is 1 : 3

There are 80 children in total.

75% of the boys and 40% of the girls are under 10

How many boys and how many girls are under 10?

[4 marks]

|  |
|--|
| $1+3=4$<br>$80 \div 4 = 20$<br>20 boys $3 \times 20 = 60$ girls<br>$20 \times 0.75 = 15$ boys $60 \times 0.4 = 24$ girls |
|--|

Your answer:

Boys: 15

Girls: 24

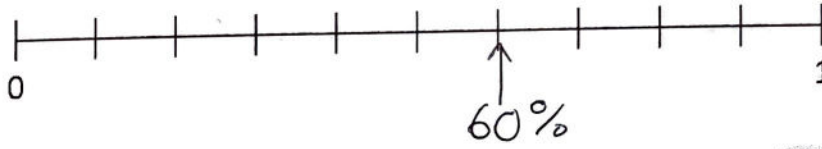
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4 (f) Natalie knows that only 60% of the children can write their name.

She chooses one of the children at random to work with.

On the scale, mark the probability that this child can write their name.

[1 mark]



4 (g) Write 60% as a decimal.

[1 mark]

Your answer:

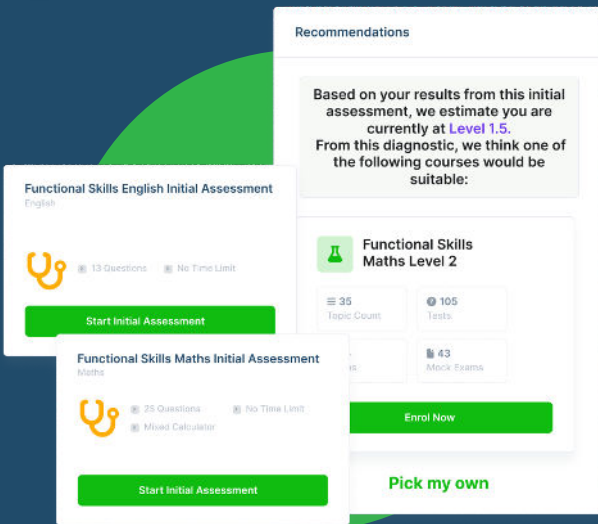
0.6

[Total marks: 15]

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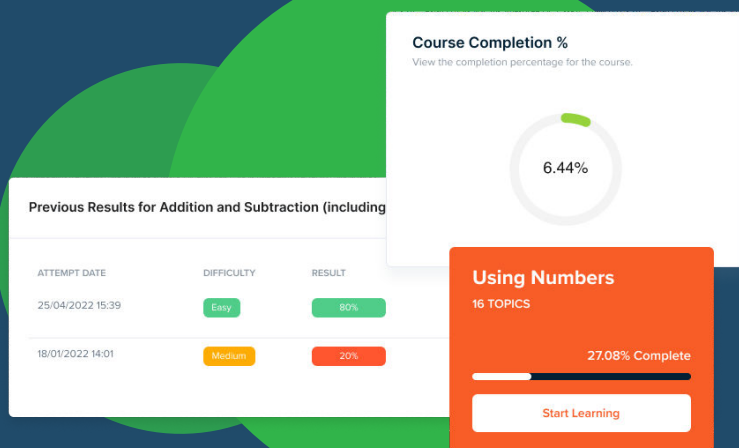
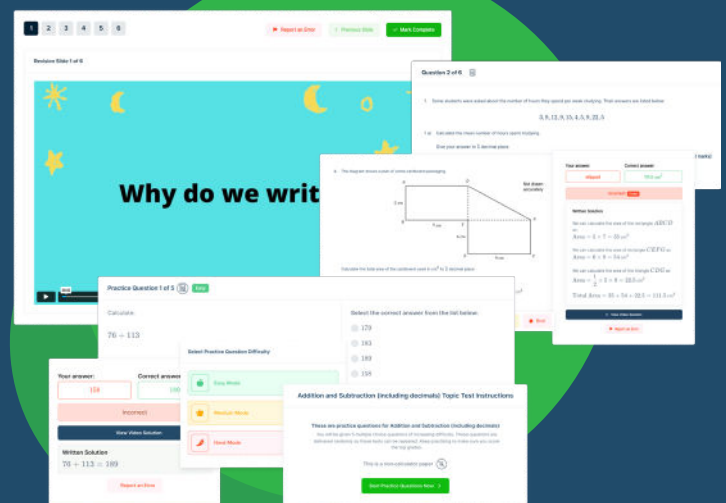


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