



Please write clearly in block capitals.

Centre number

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Candidate number

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Surname \_\_\_\_\_

Forename(s) \_\_\_\_\_

Candidate signature \_\_\_\_\_

I declare this is my own work.

# Functional Skills Level 1 MATHEMATICS

Paper 2 Calculator

Time allowed: 1 hour 30 minutes

**Materials**

For this paper you must have:

- a calculator
- mathematical instruments.



**Instructions**

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.
- State the units of your answer where appropriate.

**Information**

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 60.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

**Advice**

In all calculations, show clearly how you work out your answer.

| For Examiner's Use |      |
|--------------------|------|
| Question           | Mark |
| 1-7                |      |
| 8                  |      |
| 9                  |      |
| 10                 |      |
| 11                 |      |
| <b>TOTAL</b>       |      |



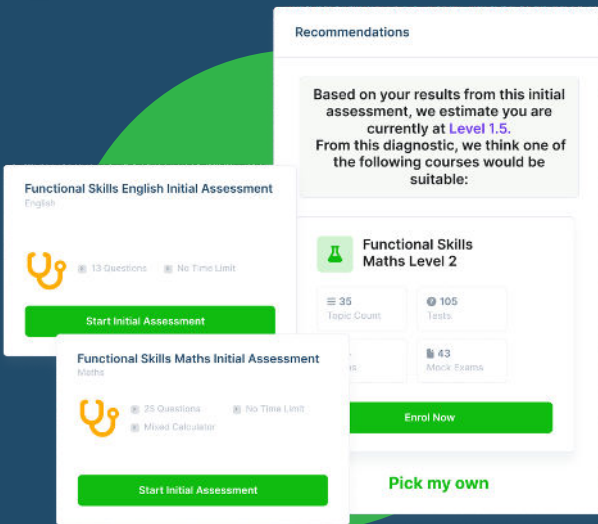
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**QAN 603/4257/2**

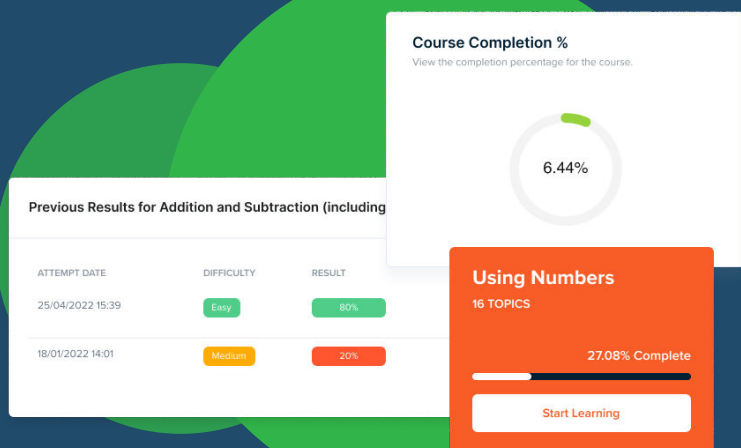
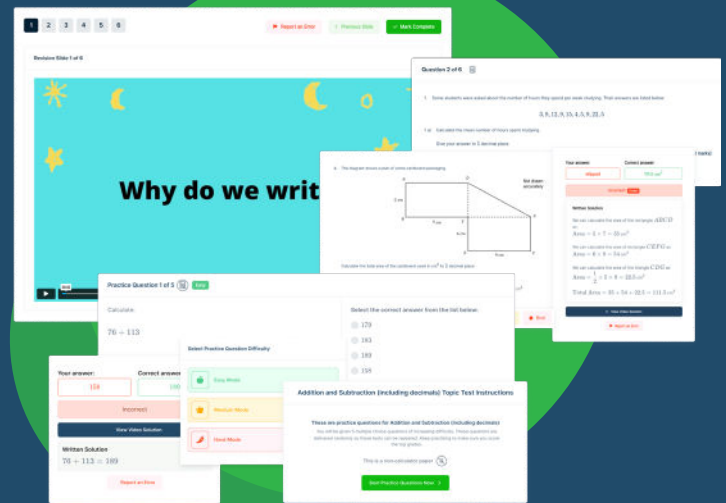


# FUNCTIONAL SKILLS ONLINE COURSES



- ✓ Your answers are analysed to determine your Current Level
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- ✓ Determine when you are ready to sit your exam

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



- ✓ 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

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Section A

Do not write  
outside the  
box

Answer **all** questions in the spaces provided.

1 Circle the **smallest** value.

[1 mark]

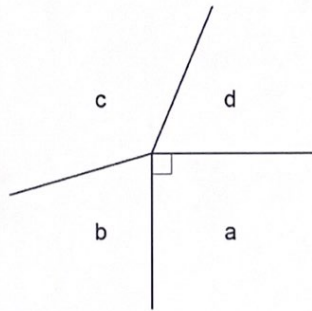
0.084

0.71

0.069

0.53

2 Four angles meet at a point.



Which angle is **obtuse**?

Circle your answer.

[1 mark]

a

b

c

d





3

Convert 3.2 litres to millilitres.

[1 mark]

$$3.2 \times 1000 = 3200$$

Answer 3200 millilitres

4

A fair, ordinary dice is rolled.

Write down the probability of rolling the number 3

[1 mark]

Answer  $\frac{1}{6}$ 

5

Here is a scale.

1 cm represents 8 km

What does a length of 2.5 cm represent?

[2 marks]

$$2.5 \times 8 = 20 \text{ km}$$

Answer 20 km

Turn over ►



6

Here are six values.

10      6      4      12      5      17

Work out the mean.

[3 marks]

$$10 + 6 + 4 + 12 + 5 + 17 = 54$$

$$54 \div 6 = 9$$

Answer           9          

7

Decrease 1600 by 20%

[3 marks]

$$1600 \times 0.8 = 1280$$

Answer           1280          Do not write  
outside the  
box

## Section B

Answer all questions in the spaces provided.

## 8 Holiday to Portugal

Sally is booking a family holiday to Portugal.

8 (a) The table shows the cost of flights and villa rental.

|              |       |
|--------------|-------|
| Flights      | £872  |
| Villa rental | £1980 |

Sally will also hire a car.

$$\text{Hire cost} = \text{£}130 + \text{£}35 \times \text{number of days hired}$$

Sally has £3500 to pay for flights, villa rental and car hire.

Does she have enough to hire a car for 14 days?

You **must** show your working.

[4 marks]

$$3500 - 872 - 1980 = \text{£}648 \text{ available}$$

$$130 + 35 \times 14 = \text{£}620 \text{ cost of car hire}$$

$$\text{£}620 < \text{£}648$$

Yes, Sally does have enough money.

Question 8 continues on the next page

Turn over ►





- 8 (b) The holiday is for 14 days.  
Sally wants to have 200 euros spending money **per day**.  
She already has 192 euros left from another holiday.

The exchange rate is £1 = 1.16 euros

She says,

"Changing £2200 into euros will be enough."

Is she correct?

You **must** show your working.

[3 marks]

$$14 \times 200 = 2800 \text{ euros needed}$$

$$2800 - 192 = 2608 \text{ euros needed}$$

$$2200 \times 1.16 = \cancel{2552} \text{ 2552 euros}$$

$$2552 < 2608$$

Sally does not have enough  
euros.



- 8 (c) The family have to travel to the UK airport at the start of the holiday.  
At the end of the holiday, they have to travel from the UK airport to their home.  
They can travel by taxi or drive.

| Taxi            | Drive  |
|-----------------|--|
| Total cost £145 | The airport is 98 miles from home<br>Petrol 15 pence per mile<br>Parking £85 |

How much cheaper is it to drive than travel by taxi?

[4 marks]

$$\begin{aligned} \text{One journey} &: 98 \times 0.15 = \pounds 14.70 \\ \text{Both ways} &: 14.70 \times 2 = \pounds 29.40 \\ \text{Add parking} &: 29.40 + 85 = \pounds 114.40 \end{aligned}$$

$$145 - 114.40 = \pounds 30.60$$

Answer £ 30.60

11

Turn over for the next question

Turn over ►

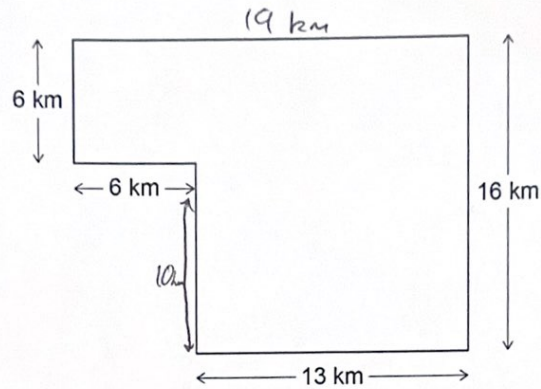




**9 Country estate cycle ride**

James is planning to cycle along the perimeter of a country estate.

9 (a) This L-shaped diagram shows his route.



James will cycle 20 km each hour.

Show that it will take him 3.5 hours to complete the cycle ride.

[4 marks]

$$13 + 6 = 19 \text{ km}$$

$$16 - 6 = 10 \text{ km}$$

$$19 + 16 + 13 + 6 + 6 + 10 = 70 \text{ km.}$$

$$70 \div 20 = 3.5 \text{ hours.}$$



- 9 (b) James will drive from home to the country estate.  
Here is his plan for the day.

|                             |            |
|-----------------------------|------------|
| Drive to the country estate | 40 minutes |
| Do the cycle ride           | 3.5 hours  |
| Have a snack                | 20 minutes |
| Drive back home             | 40 minutes |

He needs to be home by 4 pm

What is the **latest** time that he can leave home to go on the cycle ride?

[4 marks]

$$40 + 20 + 40 = 100 \text{ min}$$

$$= 1 \text{ h } 40 \text{ min}$$

$$\text{Total time} = 1 \text{ h } 40 \text{ min} + 3 \text{ h } 30 \text{ min}$$

$$= 5 \text{ h } 10 \text{ min}$$

$$5 \text{ h } 10 \text{ min before } 4 \text{ pm} = 10:50 \text{ am}$$

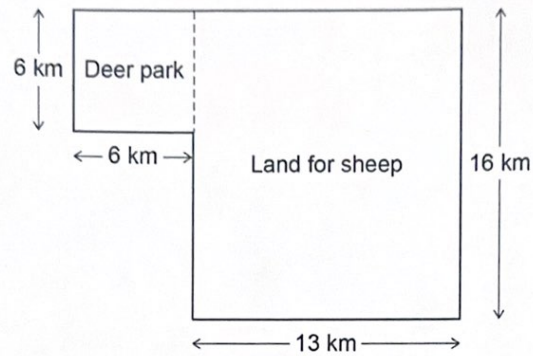
Answer 10:50 am

Question 9 continues on the next page

Turn over ►



- 9 (c) The estate is made up of a deer park and some land for sheep.



James says,

"The area of the land for sheep is more than 5 times the area of the deer park."

Is he correct?

You **must** show your working.

[4 marks]

$$\text{Deer park} = 6 \times 6 = 36 \text{ km}^2$$

$$\text{Sheep} = 16 \times 13 = 208 \text{ km}^2$$

$$36 \times 5 = 180 < 208$$

James is correct.





**10 Clothes company — making badges**

A clothes company makes school uniforms.  
They use a machine to make badges for blazers.  
The machine usually makes 5000 badges per day.

- 10 (a)** One day, the machine makes 5000 badges.  
2 of the badges are faulty.  
The manager says,

"The probability that a badge is faulty is  $\frac{1}{250}$ "

Is he correct?

You **must** show your working.

[2 marks]

$$\frac{2}{5000} = \frac{1}{2500} \text{ not } \frac{1}{250}$$

The manager is not correct.

Question 10 continues on the next page

Turn over ►



- 10 (b) One week, the machine broke down on Wednesday.  
The machine only made 1400 badges that day.  
The machine still produced 25 000 badges that week.  
It produced the **same** number on Thursday as on Friday.

Complete the table.

[3 marks]

| Monday | Tuesday | Wednesday | Thursday | Friday | TOTAL |
|--------|---------|-----------|----------|--------|-------|
| 5000   | 5000    | 1400      | 6800     | 6800   | 25000 |

$$25000 - 5000 - 5000 - 1400$$
$$= 13600$$

$$13600 \div 2 = 6800$$

6800 on Thursday and Friday



- 10 (c) The table shows the costs of making 5000 badges.

|             |               |
|-------------|---------------|
| Materials   | 17p per badge |
| Other costs | £265          |

The company wants to make **at least 40%** profit on the costs.

Work out the minimum price the company should charge per badge.

Give your answer in pence.

[6 marks]

$$0.17 \times 5000 = \text{£}850$$

$$850 + 265 = \text{£}1115$$

~~1115~~

$$1115 \times 1.4 = \text{£}1561$$

$$1561 \div 5000 = 0.312 = 31.2\text{p}$$

32p

Answer 32p pence

11

Turn over ►





**11 Hotel work**

Aisha works part-time in a hotel.

- 11 (a)** Aisha is paid an hourly rate of £8.85 for working any day from Monday to Saturday.  
She is paid double this hourly rate for each hour worked on Sunday.

Aisha wants her pay to be at least £230 next week.

Here are the hours she will work from Monday to Saturday.

|          |         |
|----------|---------|
| Monday   | 5 hours |
| Thursday | 4 hours |
| Saturday | 7 hours |

Work out the minimum number of hours she needs to work on Sunday.

You **must** show your working.

[6 marks]

$$5 + 4 + 7 = 16$$

$$16 \times 8.85 = \pounds 141.60$$

$$\pounds 230 - \pounds 141.60 = \pounds 88.40$$

$$\pounds 8.85 \times 2 = \pounds 17.70$$

$$88.40 \div 17.70 = 4.99... \text{ hr}$$

5 hours

Answer 5 hours



- 11 (b) Aisha often receives tips from customers.  
One month she receives £72.90 in tips.  
She spends  
    half of the £72.90 on clothes  
    one fifth of the £72.90 on make-up.  
She saves the rest.  
Work out how much she saves.

**[4 marks]**

$$\frac{1}{2} + \frac{1}{5} = \frac{7}{10}$$

$$1 - \frac{7}{10} = \frac{3}{10}$$

$$\frac{3}{10} \times 72.9 = \pounds 21.87$$

Answer £ 21.87

Question 11 continues on the next page

Turn over ►



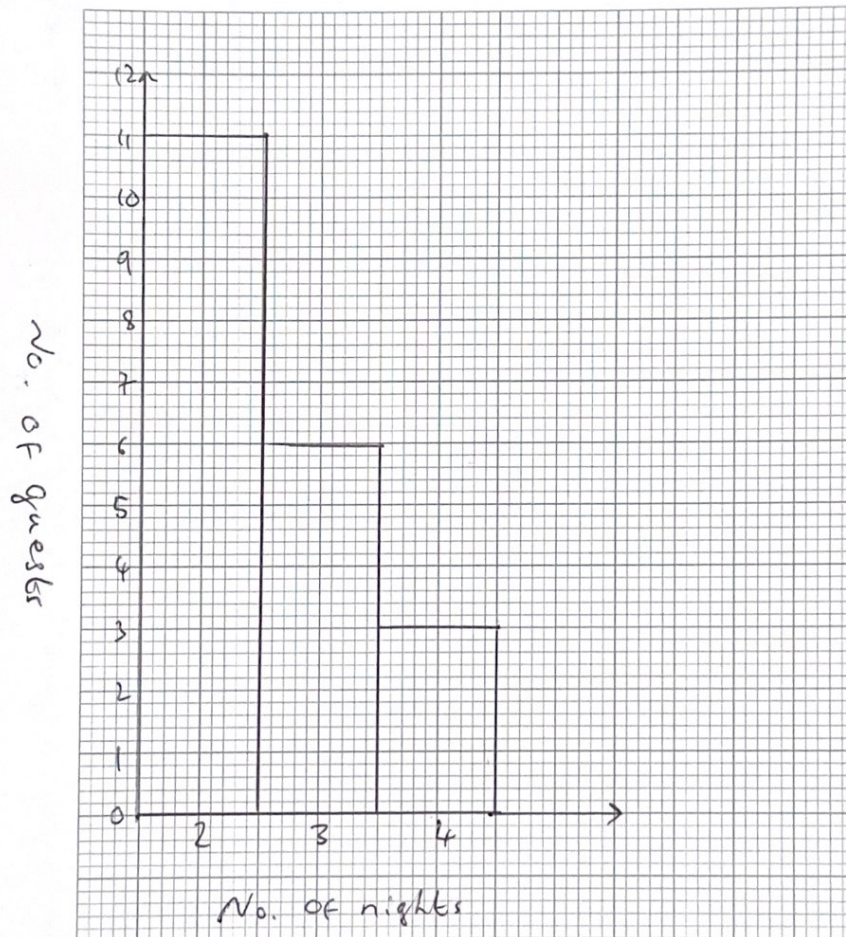


- 11 (c) The hotel manager wants to know how many nights the guests stay in the hotel. Aisha collects this information about 20 guests.

| Number of nights | Number of guests |
|------------------|------------------|
| 2                | 11               |
| 3                | 6                |
| 4                | 3                |

Draw a suitable diagram to show this information.

[4 marks]



14

END OF QUESTIONS





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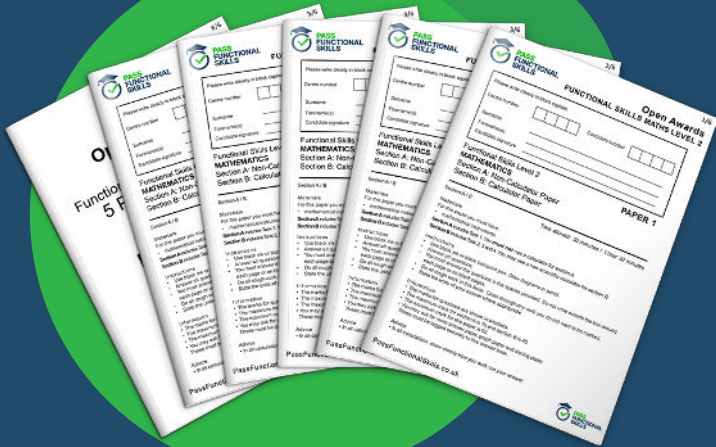
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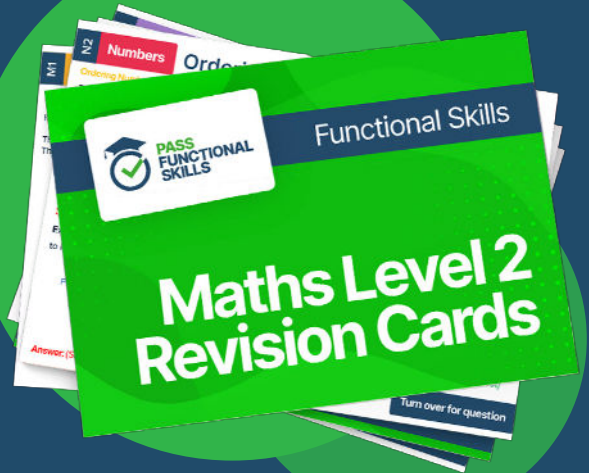
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