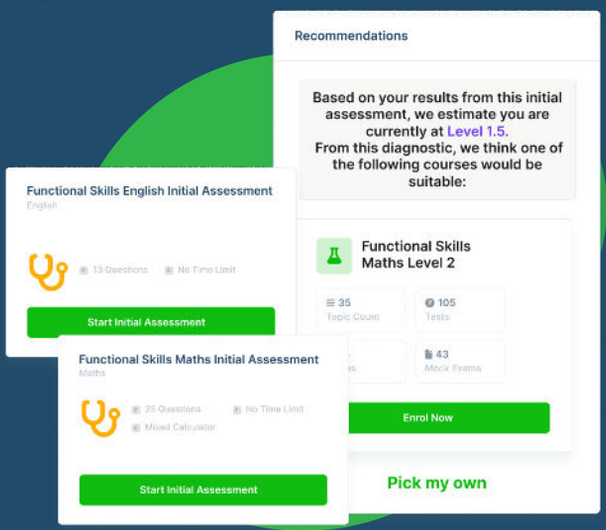
Functional Skills
Mathematics Level 1

Practice

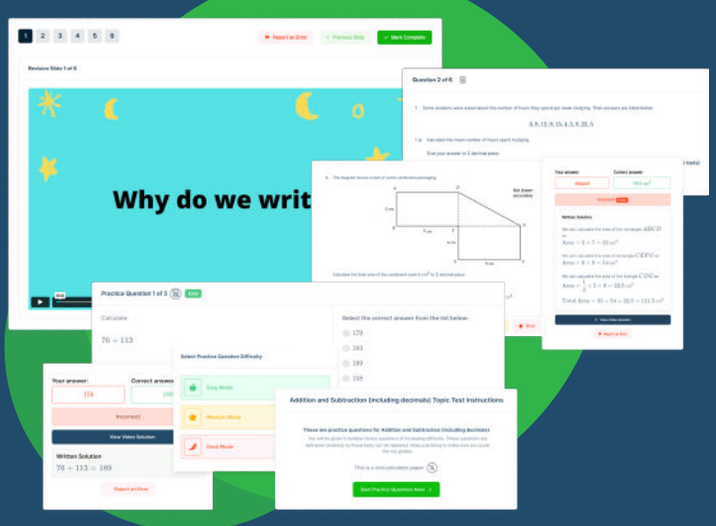
PASS FUNCTIONAL SKILLS

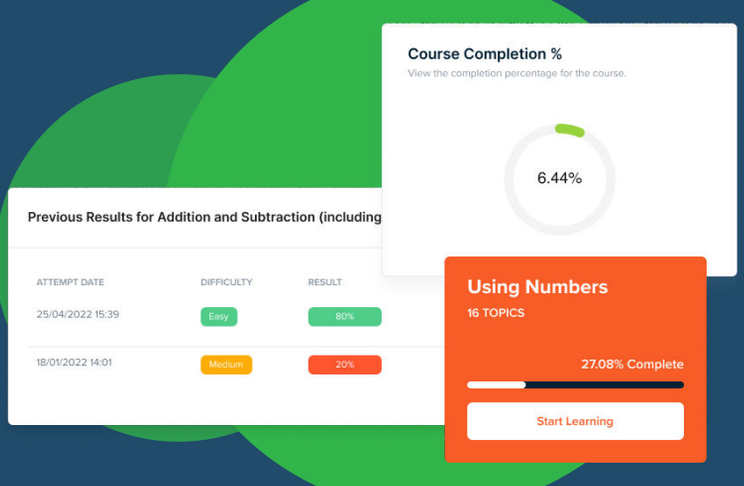
FUNCTIONAL SKILLS ONLINE COURSES



- 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

- Explainer videos on every topic
- Quick-fire style mutiple 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

Or visit
passfunctionalskills.co.uk

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Mathematics Level 1
Online Practice
Assessment

The Practice Assessment for Level 1 Functional Skills Mathematics can be viewed on the XAMS platform by clicking here.

LEVEL 1 FUNCTIONAL SKILLS QUALIFICATION IN MATHEMATICS

SECTION A - QUESTION AND ANSWER PAPER
NON-CALCULATOR – 30 MINUTES
PRACTICE ASSESSMENT 1 (FSM109P)

Do not open this paper until you are told to do so by the invigilator.

Overall assessment marks available: **60**
Overall assessment time limit: **2 HOURS**

There are **TWO** Sections to this assessment:

- **Section A** includes Task 1. You **must not** use a calculator for this section.

  Total marks available: 15. Time limit: 30 minutes
- **Section B** includes Task 2, 3 and 4. You can use a non-scientific calculator for this section

  Total marks available: 45. Time limit: 1 hour and 30 minutes

For Section A you need:

- This question and answer paper
- A pen with black or blue ink
- A pencil
- A ruler and a protractor

INTERNET ACCESS IS NOT PERMITTED AND YOU MUST NOT USE A CALCULATOR

The invigilator will stop the assessment after 30 minutes. You must hand in this question and answer paper at this point.

The invigilator will then hand out **Section B** and a non-scientific calculator. You will then have a further 1 hour and 30 minutes to complete **Section B**.

Instructions

1. Please sign and date below to confirm that your details are correct and that you have understood the instructions.
2. Read each task and question carefully.
3. Remember to show all your workings out clearly.
4. The number of marks available for each question is shown in brackets. Use these marks to guide you on how long to spend on each question.
5. Answer **all** questions using the space provided on this question and answer paper.
6. If you have time, check your work for **Section A** at the end. Once you have handed in this question and answer paper, you will not be able to check this again.
7. If you use extra paper, write your name, learner number and the question number you are answering on it and securely attach it to this question and answer paper.

Learner name:	
Learner number:	
Centre number:	
Signature:	
Today's date:	

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For Markers Use Only

Section A

Question 1

Calculate $-10 + 3$ (1 mark)

Show your calculations and/or workings out here:

Write your answer in this box:

-7

Question 2

Calculate 1000×0.15 (1 mark)

Show your calculations and/or workings out here:

$0.150 = 150$

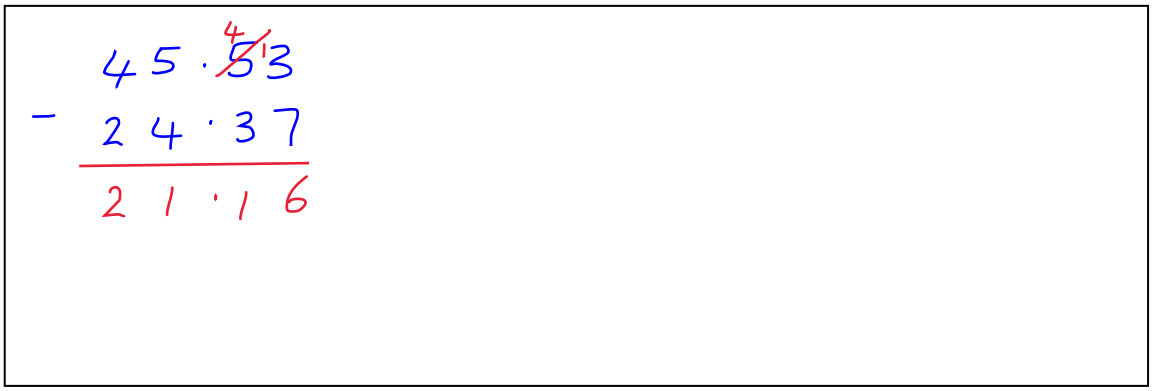
Write your answer in this box:

150

Question 3

Calculate 45.53 – 24.37 (1 mark)

Show your calculations and/or workings out here:



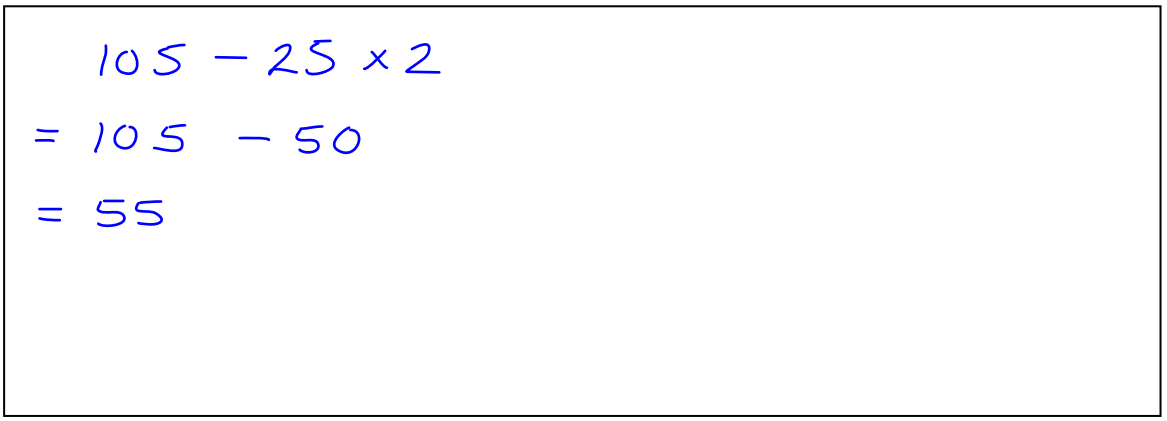
Write your answer in this box:

21.16

Question 4

Calculate 105 – 25 × 2 (1 mark)

Show your calculations and/or workings out here:



Write your answer in this box:

55

Question 5

Which of the following percentages is equivalent to $\frac{2}{5}$? (1 mark)

10% 20% 25% 40% 80%

Show your calculations and/or workings out here:

$5\overline{)2.20}$ 0.4 so $\frac{2}{5} = 0.4$

$= 40\%$

Write your answers in this box:

40 %

Question 6

Put the following fractions in order of size: (1 mark)

$\frac{3}{5}$ $1\frac{1}{4}$ $\frac{1}{2}$ $1\frac{1}{5}$ $\frac{2}{3}$

0.6 1.25 0.5 1.2 0.666...

Show your calculations and/or workings out

$\frac{3}{5}$ $5\overline{)3.30}$ 0.6

$1\frac{1}{5} = \frac{6}{5}$ $5\overline{)6.10}$ 1.2

$1\frac{1}{4} = \frac{5}{4}$ $4\overline{)5.1020}$ 1.25

$\frac{2}{3}$ $3\overline{)2.20202020}$ $0.66\ldots$

$\frac{1}{2}$ $2\overline{)1.10}$ 0.5

$\frac{1}{2}, \frac{3}{5}, \frac{2}{3}, 1\frac{1}{5}, 1\frac{1}{4}$

Question 7

Sasha is an art teacher.

She buys art materials in packs and then sells them on individually to her students at cost price.

The prices she pays for the packs of items are shown in the following table:

Item	Quantity	Cost price
Paint brushes	Pack of 100	£39.00
Canvas board	Pack of 10	£18.50
Tubes of paint	Pack of 10	£14.29

A student buys two paint brushes, three tubes of paint and one canvas board.

How much in total should Sasha charge the student? (4 marks)

Show your calculations and/or workings out here:

Brushes : 39 ÷ 100 = £0·39 each

canvas : 18·50 ÷ 10 = £1·85 each

Paint : 14·29 ÷ 10 = £1·43 each

Total : 2 × 0·39 + 1·85 + 3 × 1·43

0·78 + 1·85 + 4·29

£6·92

39 × 2 = 78

143 × 3 = 429

0·78
1·85
4·29
6·92

Write your answer in this box:

£6·92

For Markers Use Only

Question 8

Sasha wants to make orange paint by mixing red and yellow paint in the ratio 3:2 r:y

She uses 180ml red paint.
She has 100ml of yellow paint.
Has Sasha got enough yellow paint? (2 marks)

Show your calculations and/or workings out here:

3 parts = 180 ml

1 part = 60 ml

2 parts = 120 ml ← so needs 120ml of yellow she doesn't have enough

Write your answer in this box:

No

For Markers Use Only

Question 9

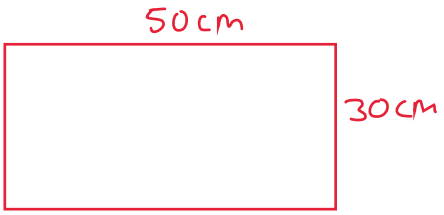
Sasha needs to put tape around the edge of five paintings.

The paintings are rectangular and are 48.9cm long and 32.6cm wide.

Estimate how much tape she needs altogether for the 5 paintings.

(3 marks)

Show your calculations and/or workings out here:



perimeter = 50 + 50 + 30 + 30
= 160 cm

Tape needed = 5 x 160
= 800cm

$$\begin{array}{r} 160 \\ \times \quad 5 \\ \hline 800 \\ {\scriptstyle 3} \end{array}$$

Write your answer in this box:

800 cm

[End of Section A]

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LEVEL 1 FUNCTIONAL SKILLS QUALIFICATION IN MATHEMATICS

SECTION B - QUESTION AND ANSWER PAPER CALCULATOR – 1 HOUR 30 MINUTES PRACTICE ASSESSMENT 1 (FSM109P)

Do not open this paper until you are told to do so by the invigilator.

Overall assessment marks available: **60**
Overall assessment time limit: **2 HOURS**

There are **TWO** Sections to this assessment:

- **Section A** – please ensure you have handed in Section A before beginning Section B
- **Section B** includes Task 2, 3 and 4. You can use a non-scientific calculator for this section.

Total marks available: 45. Time limit: 1 hour and 30 minutes.

For Section B you need:

- This question and answer paper
- A pen with black or blue ink
- A pencil
- A ruler and a protractor
- A non-scientific calculator

INTERNET ACCESS IS NOT PERMITTED

You now have a further 1 hour and 30 minutes to complete **Section B**.

Instructions

1. Please sign and date below to confirm that your details are correct and that you have understood the instructions.
2. Read each task and question carefully.
3. Remember to show all your workings out clearly.
4. The number of marks available for each question is shown in brackets. Use these marks to guide you on how long to spend on each question.
5. Answer **all** questions using the space provided on this question and answer paper.
6. If you have time, check your work for **Section B** at the end.
7. If you use extra paper, write your name, learner number and the question number you are answering on it, and securely attach it to this question and answer paper.
8. At the end of this section (**Section B**), hand in this question and answer paper and all notes to the invigilator.

Learner name:	
Learner number:	
Centre number:	
Signature:	
Today's date:	

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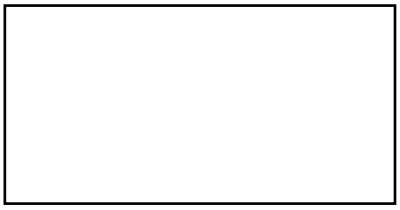
Section B

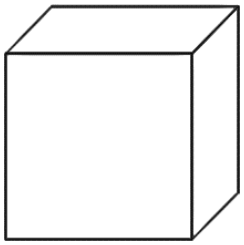
Question 10



Plan view

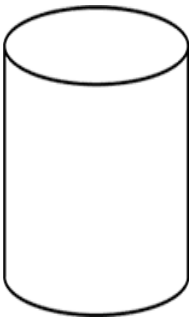
The diagram above shows the plan view of which shape below? (1 mark)

A



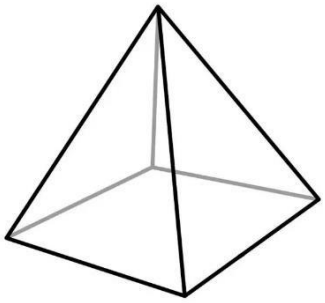
Cube

B



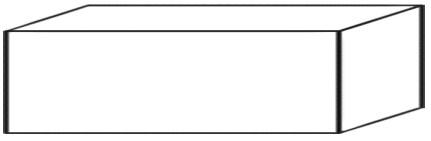
Cylinder

C



Square-based pyramid

D



Cuboid

Write your answer in this box:

D

Question 11

The table below shows the ages of 18 visitors to a museum.

2	4	28	35	19	21
7	31	35	48	10	41
38	8	9	27	18	25

Complete the table below. (1 mark)

Age (years)	Frequency
0–9	5
10–19	3
20–29	4
30–39	4
40–49	2

Show your calculations and/or workings out here:

For Markers Use Only

Question 12

Which of the following percentages is the highest? (1 mark)

37% 42% 85% 87% 56% 57% 18%

Write your answer in this box:

87 %

Question 13

Eilish owns a children's soft-play area.

She has a ball pit which is 2.4m by 2.4m and has a depth of 0.45m.

The ball pit needs 2250 balls for each cubic metre (m^3).

How many balls will it take to fill the ball pit? (4 marks)

Volume of pit $= 2.4 \times 2.4 \times 0.45$
$= 2.592 m^2$

Balls needed $= 2.592 \times 2250$
$= 5832$

Show your calculations and/or workings out here:

Write your answer in this box:

5832

Question 14

Eilish has 30 mats to cover the floor of the soft-play area.

The soft-play floor mats come in three colours: black, light grey and dark grey.

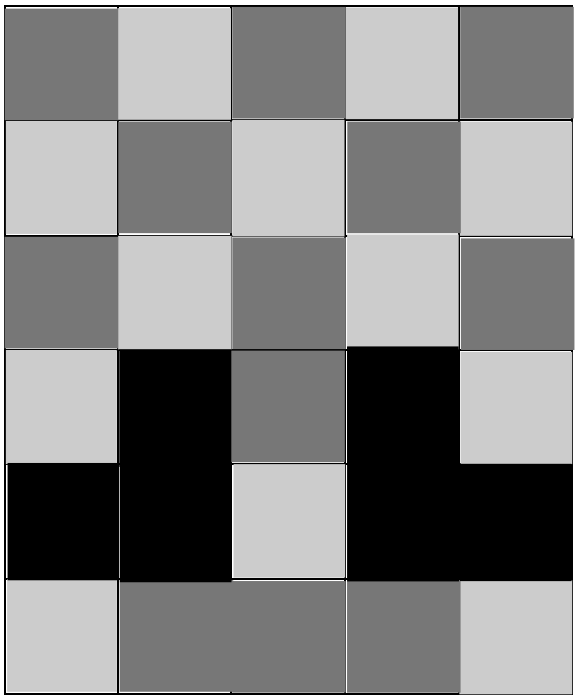
$\frac{1}{5}$ of the soft-play floor mats are black. $30 \div 5 = 6$ black mats

There are equal numbers of patterned mats. $30 - 6 = 24$ so must have 12 light grey, 12 dark grey

On the diagram of the floor seen below, arrange the mats in a pattern with at least one line of symmetry.

(3 marks)

Floor (30 mat spaces)



Show your calculations and/or workings out here:

Question 15

The soft-play area can be hired for children's parties. The prices are as follows:

£90 to hire the soft play area for up to 40 children
£17 for party food for 5 children
£12 for 10 party bags
15% discount for parties Monday to Thursday

Eilish takes a booking for a party of 30 children for a Thursday including food and a party bag for each child.

How much should she charge for the soft-play party for 30 children including food and party bags for each child?

(5 marks)

Show your calculations and/or workings out here:

×3 10 party bags cost £12
30 party bags cost 3 × 12 = £36

×6 Food for 5 children is £17
Food for 30 children is 6 × 17 = £102

Total cost = 36 + 102 + 90
= £228

15% discount, so only paying 85% of full cost

228 × 0·85 = £193·80

Write your answer in this box:

£193·80

Question 16

Write 832304 in words. (1 mark)

Write your answer in this box:

Eight hundred and thirty two thousand, three hundred and four

Question 17

There are three red sweets, four yellow sweets and three blue sweets in a bag.
What is the probability that a sweet taken out of the bag at random is red?
Give your answer as a fraction.

(1 mark)

Show your calculations and/or workings out here:

3 + 4 + 3 = 10 sweets total

3 are red so $\frac{3}{10}$

Write your answer in this box:

$\frac{3}{10}$

For Markers Use Only

Question 18

Calculate the range of this set of numbers. (1 mark)

23.1 25.8 25.3 23.6 19.1 21.2

Show your calculations and/or workings out here:

$25.8 - 19.1 = 6.7$

Write your answer in this box:

6.7

For Markers Use Only

Question 19

Amy is 36 years old and wants to improve her fitness level.

She uses this formula to find the healthy upper and lower heart rate limits, in beats per minute (bpm), for her age during moderate exercise.

Lower heart rate = (220 – age) × 0.6
Upper heart rate = (220 – age) × 0.7

Her heart rate while exercising is 118 bpm.

During exercise, is her heart rate **within** the healthy upper and lower limits for her age?

(3 marks)

Show your calculations and/or workings out here:

lower : (220 − 36) × 0·6 = 110·4 bpm
upper : (220 − 36) × 0·7 = 128·8 bpm
} 118 is between these values

Write your answer in this box:

Yes

Question 20

Amy records how much exercise she completed during the past week:

¾ hour swimming on both Monday and Thursday

1¼ hours in the gym on Saturday

20 minutes brisk walking on five days

How much time did she spend exercising altogether over the week?
Give your answer in hours and minutes. (2 marks)

Show your calculations and/or workings out here:

Swimming: 45 × 2 = 90 mins

gym: 75mins

walk: 20 × 5 = 100 mins

total = 90 + 75 + 100
= 265 mins
= 4hrs 25mins

1 hr = 60 mins
2 hr = 120 mins
3 hr = 180 mins
4 hr = 240 mins

Write your answer in this box:

4hrs 25mins

For Markers Use Only

Question 21

Amy walks 6680 steps on Monday.

Each step length is an average of 0.7m.

Using her average step length, how many kilometres does she walk on Monday?

Give your answer to one decimal place. (4 marks)

Show your calculations and/or workings out here:

$6680 \times 0.7 = 4676$ m

$= 4.676$ km

4.7km to 1dp

÷1000

m km

Write your answer in this box:

4.7 km

Question 22

Amy records her blood pressure over the week.

These are her blood pressure values:

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Blood pressure	113	121	~~99~~	112	118	115	~~129~~

She has been told that to calculate her mean blood pressure she should remove the highest and lowest values first.

What is Amy's mean blood pressure? (3 marks)

Show your calculations and/or workings out here:

$$\frac{113 + 121 + 112 + 118 + 115}{5} = \frac{579}{5}$$

$$= 115.8$$

Write your answer in this box:

115.8

Question 23

The table below shows the number of parcels delivered by a delivery driver over four weeks.

Weeks	1	2	3	4
Number of parcels	430	560	720	850

Draw a line graph to show the number of deliveries over the four weeks.

(3 marks)

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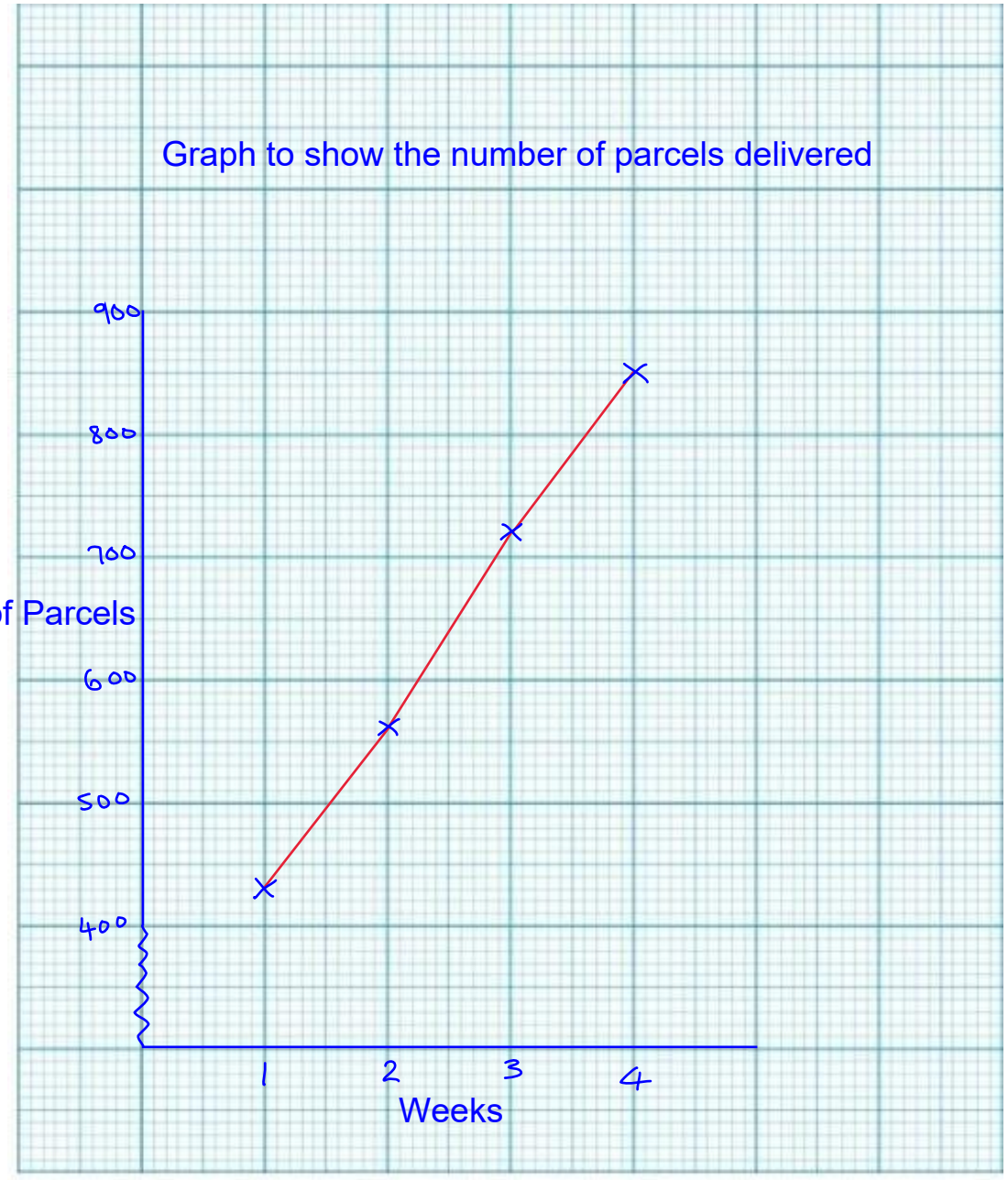


For Markers Use Only

Question 24

Liam is a student who has worked over the summer.

He has earned £2304.26 altogether.

He earns £8.72 per hour.

He is entitled to 0.12 hours of holiday for every hour he has worked.

How many hours holiday is he entitled to? (4 marks)

Show your calculations and/or workings out here:

Number of hrs = 2304·26 ÷ 8·72
= 264·25

Holiday entitlement = 0·12 × 264·25
= 31·71 hrs

Write your answer in this box:

31·71

For Markers Use Only

Question 25

Liam earned £2304.26 altogether.

He spent £399 on a new laptop and puts half of his remaining earnings into a savings account.

The savings account pays 5% interest per year.

How much money will Liam have in his savings account after one year?

(3 marks)

Show your calculations and/or workings out here:

2304 · 26 − 399 = £1905 · 26 left after buying laptop

Puts 1905.26 ÷ 2 = 952 · 63 into savings account

After a year has 952 · 63 × 1 · 05 = £1000 · 26

Write your answer in this box:

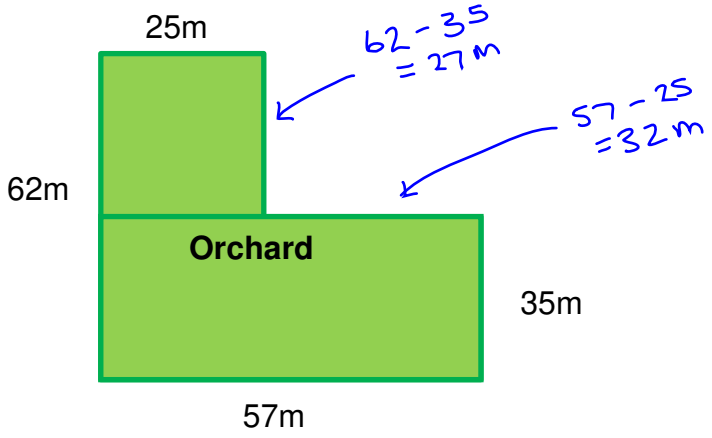
£1000 · 26

Question 26

Anya is planting some fruit trees in her orchard.

The dimensions of the orchard are shown below:

Diagram not to scale



She needs to have an area of at least 64 m² for each fruit tree.

How many fruit trees will she be able to plant in her orchard? (5 marks)

For Markers Use Only

Show your calculations and/or workings out here:

Area = (25 × 27) + (35 × 57)
= 675 + 1995
= 2670 m^2

2670 ÷ 64 = 41.71875 trees

So 41 whole trees

Write your answer in this box:

41

[End of assessment]

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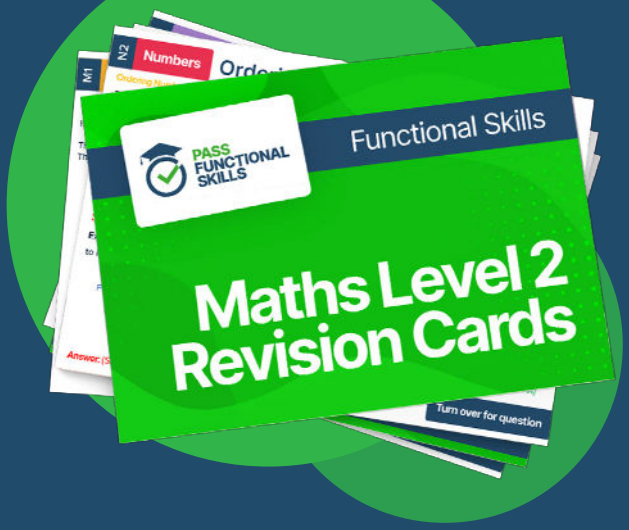
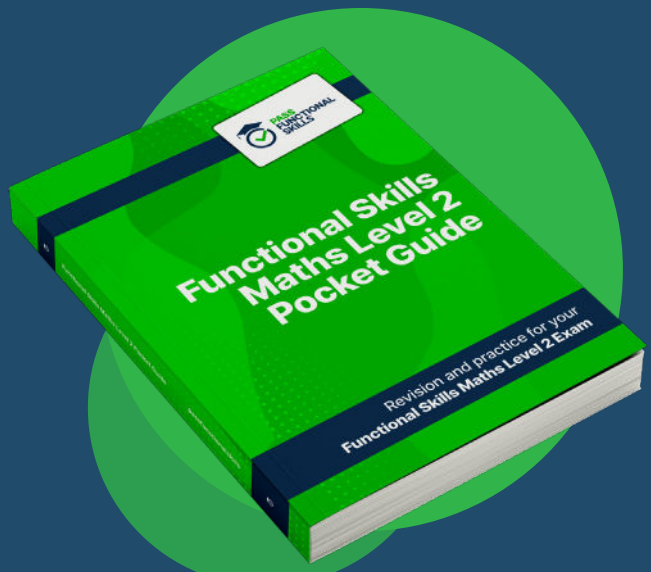
PASS FUNCTIONAL SKILLS

Functional Skills Maths
Level 2 Practice Papers



Functional Skills Maths
Level 2 Revision Cards

Functional Skills English Level 2
Practice Papers & Revision Cards



Functional Skills Maths
Level 2 Pocket Revision Guide

Or visit
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