Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel Functional Skills

Centre Number	Candidate Number

Practice Set 3

Time: 25 minutes | Paper Reference **PRACL2/N03**

Mathematics

Level 2

Section A (Non–Calculator)

You must have:
Pen, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses. Tracing paper may be used.

Total Marks

My signature confirms that I will not discuss the content of the test with anyone.

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** questions.
- Write your final answers in the boxes provided.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You **must** show clearly how you get your answers in the spaces provided. Marks will be awarded for your working out.
- Check your working and answers at each stage.
- Diagrams are **not** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**
- Take the value of π to be 3.14

Information

- The total mark for this section is 16.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- This sign ☑ shows where marks will be awarded for showing your checks.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

S68462A

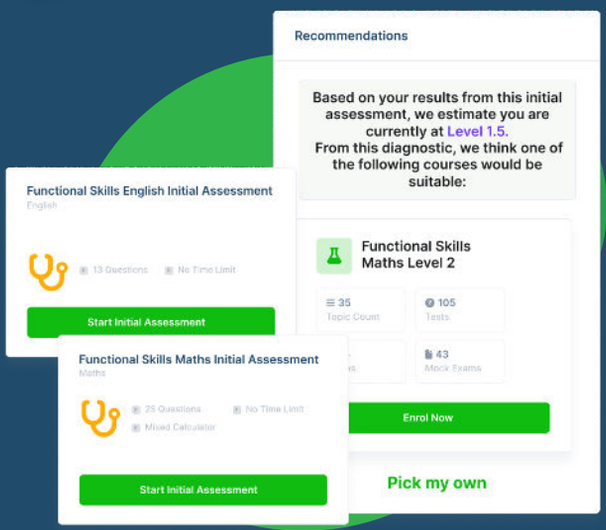
1/1/1

S 6 8 4 6 2 A 0 1 0 8

Pearson

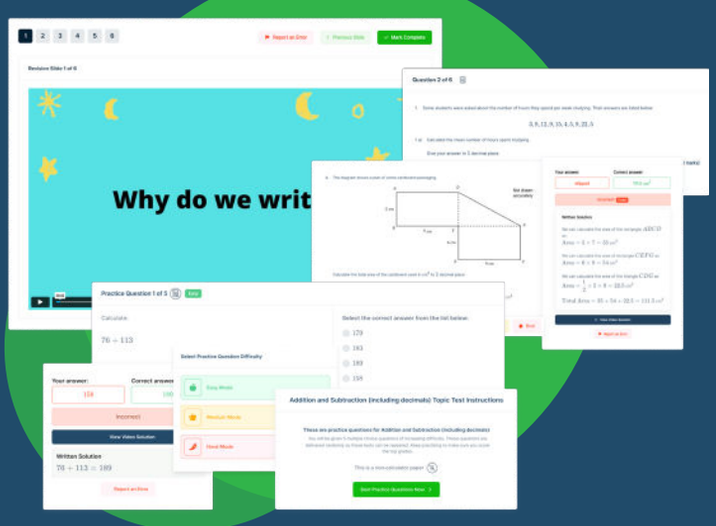
PASS FUNCTIONAL SKILLS

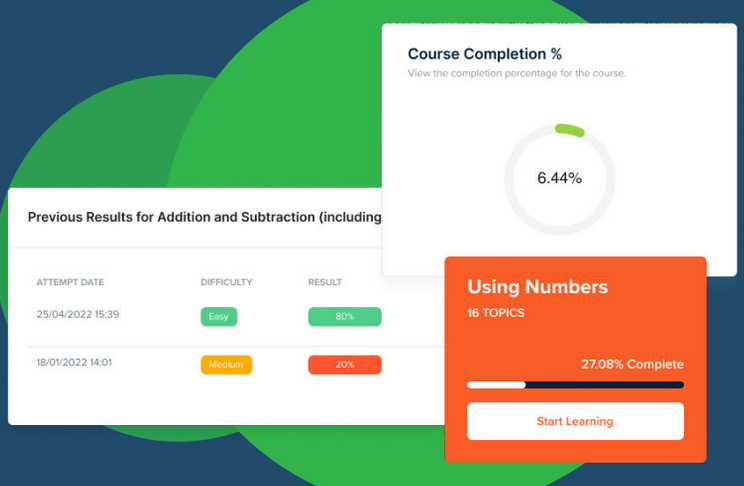
FUNCTIONAL SKILLS ONLINE COURSES



- 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

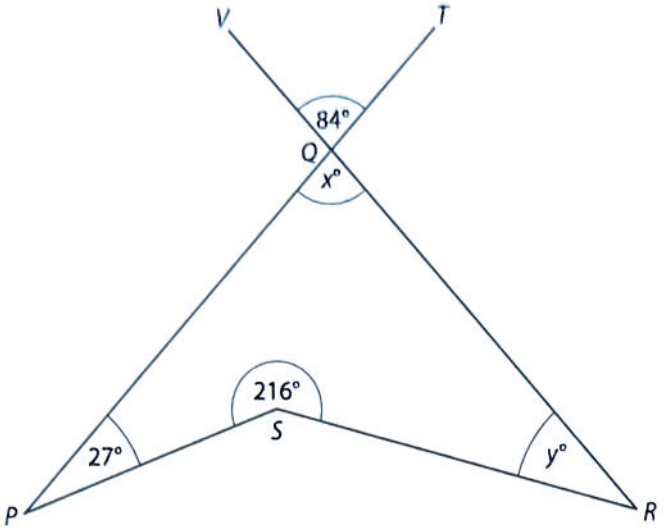
Or visit
passfunctionalskills.co.uk

BLANK PAGE

SECTION A

Answer ALL questions. Write your answers in the spaces provided.

1 *PQRS* is a quadrilateral.



PQT is a straight line.

RQV is a straight line.

(a) Write down the value of *x*.

(1)

84°

(b) Work out the value of *y*.

(2)

Angles in quadrilateral add up to 360°.

$y = 360 - 84 - 27 - 216$

$= 33°$

33°

(Total for Question 1 is 3 marks)

2 Prasha sees this advert for an apprenticeship.

> Apprentice plumber
>
> £5.68 per hour
> 37 hours per week

Prasha will be paid for 52 weeks of the year.

She estimates that she will have an annual salary of £11 500

Use estimation to check if Prasha's estimate is sensible.
You **must** show your working.

(3)

£5.68 → £6

37 hours → 40 hours

52 weeks → 50 weeks

Salary = 6 × 40 × 50

= 240 × 50

= £12 000

$$\begin{array}{r} 240 \\ \times \quad 50 \\ \hline 12000 \end{array}$$

Yes Prasha's estimate seems sensible.

(Total for Question 2 is 3 marks)

3

(a) Write 8% as a decimal.

(1)

$8 \div 100 = 0.08$

0.08

(b) Work out $\sqrt{64} \times (12 - 7)$

(1)

$\sqrt{64} = 8$

$(12 - 7) = 5$

$8 \times 5 = 40$

40

(c) Work out $\frac{4}{5} - \frac{3}{8}$

(2)

$\frac{4}{5} - \frac{3}{8}$

$= \frac{32}{40} - \frac{15}{40}$

$= \frac{17}{40}$

$\frac{4}{5} = \frac{32}{40}$ (×8)

$\frac{3}{8} = \frac{15}{40}$ (×5)

$\frac{17}{40}$

(Total for Question 3 is 4 marks)

4 Uditi wants to make a shoe tray.
The tray will hold rows of shoes.
She wants each row to hold 6 pairs of shoes.

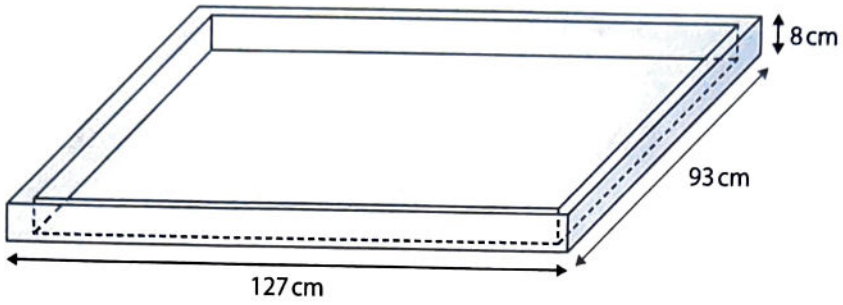
Uditi measures the width of 5 pairs of her shoes.
Here are the results in cm.

18.2 19.7 19.4 18.6 18.9

To find the total width of 6 pairs of shoes Uditi will multiply the median width of these pairs of shoes by 6

The width of the base of the tray will need to be 10% more than the total width of 6 pairs of shoes and have an extra 3 cm at each end of the tray for a frame.

Uditi draws this diagram of the largest shoe tray she can make with the wood she has.



Uditi thinks this tray can hold 6 pairs of her shoes in a row.

Is she correct?
Show why you think this.

(6)

Median Width:

18.2, 18.6, (18.9), 19.4, 19.7

18.9×6

$= 113.4$

$$\begin{array}{r} 189 \\ \times \quad 6 \\ \hline 1134 \end{array}$$

Increase 113.4 by 10%:

10% of $113.4 = 113.4 \div 10 = 11.34$

$113.4 + 11.34 = 124.74$

Need $2 \times 3\text{cm} = 6\text{cm}$ extra.

$124.74 + 6 = \underline{130.74\text{cm}}$

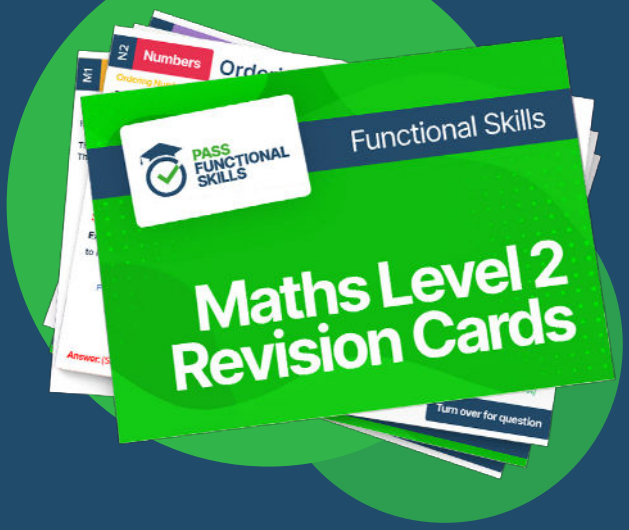
So <u>no</u> the tray shown will not be big enough.

(Total for Question 4 is 6 marks)

TOTAL FOR SECTION A IS 16 MARKS

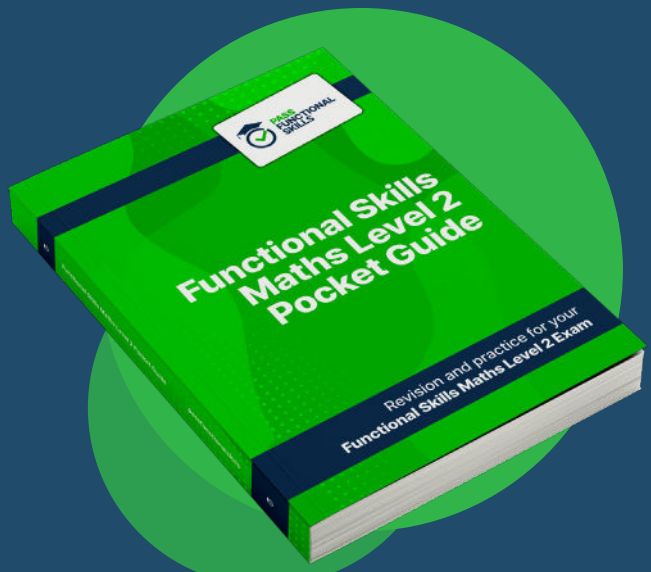
PASS FUNCTIONAL SKILLS

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
passfunctionalskills.co.uk

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel Functional Skills

Centre Number	Candidate Number

Practice Set 3

Time: 1 hour 30 minutes | Paper Reference **PRACL2/C03**

Mathematics

Level 2
Section B (Calculator)

You must have:
Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses. Tracing paper may be used.

Total Marks

My signature confirms that I will not discuss the content of the test with anyone.

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** questions.
- Write your final answers in the boxes provided.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You **must** show clearly how you get your answers in the spaces provided. Marks will be awarded for your working out.
- Check your working and answers at each stage.
- Diagrams are **not** accurately drawn, unless otherwise indicated.
- **Calculators may be used.**
- If your calculator does not have a π button take the value of π to be 3.14

Information

- The total mark for this section is 48.
- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- This sign ☑ shows where marks will be awarded for showing your checks.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

S68463A

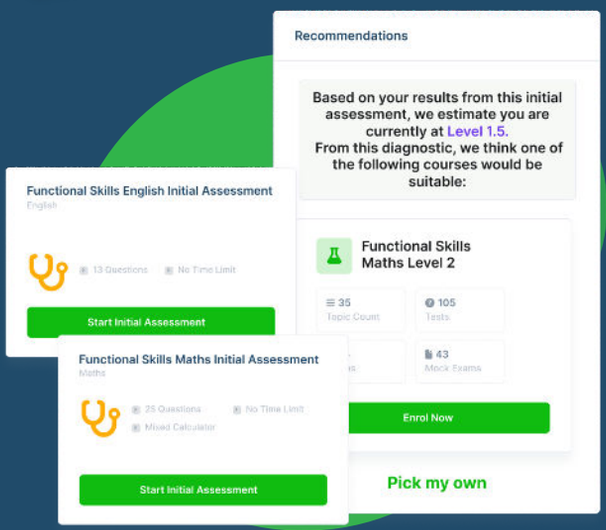
1/1/1/1

S 6 8 4 6 3 A 0 1 2 0

Pearson

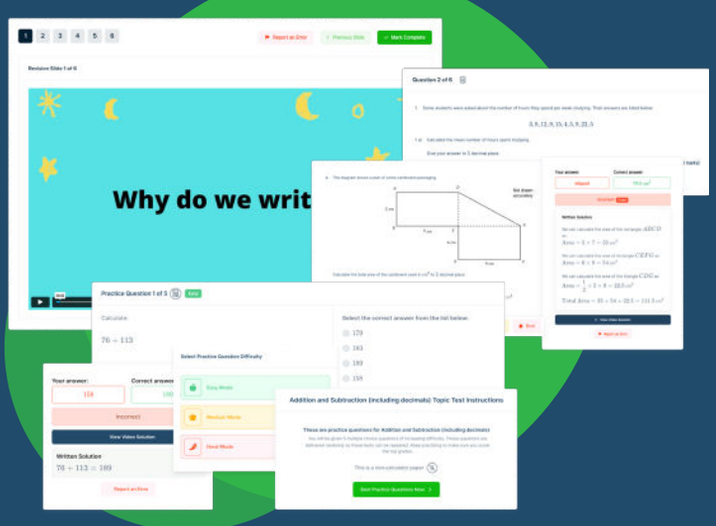
PASS FUNCTIONAL SKILLS

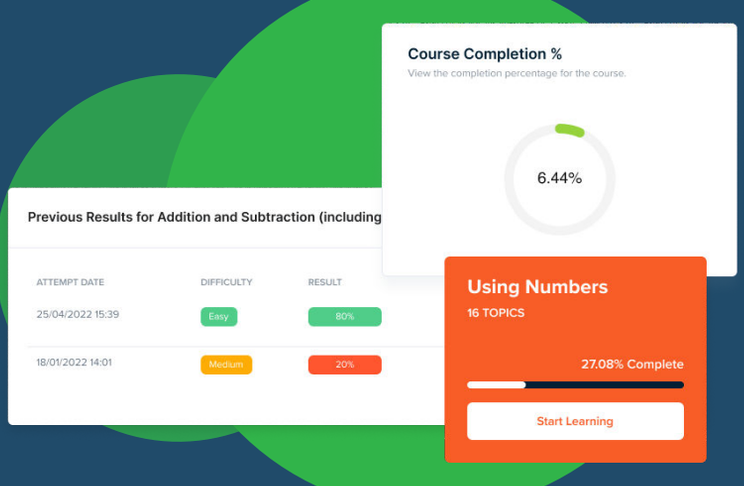
FUNCTIONAL SKILLS ONLINE COURSES



- 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

SECTION B

Answer ALL questions. Write your answers in the spaces provided.

1 Susie wants to make a dress.

To make the dress she needs a piece of fabric with a length of $2\frac{3}{4}$ yards.
Fabric is sold in lengths measured in cm.

1 inch = 2.54 cm
1 yard = 36 inches

Work out the length of fabric, in cm, Susie needs to make the dress.
You **must** show your working.

(3)

$2\frac{3}{4}$ yards $= 2\frac{3}{4} \times 36$ inches

$= 99$ inches

99 inches $= 99 \times 2.54$ cm

$= 251.46$ cm

251.46 cm

(Total for Question 1 is 3 marks)

2 Jamal owns a car paint repair business.
He has 375 ml of thinner.

Jamal has plenty of colour and hardener
He has to mix colour, hardener and thinner in the ratio 2 : 1 : 10 to make car paint.

Work out the maximum amount of car paint Jamal can make with 375 ml of thinner.

(3)

Colour : Hardener : Thinner

C : H : T

2 : 1 : 10 ×37.5 (+37.5)

75 : 37.5 : 375 ×37.5 (375 ÷ 10 = 37.5)

Total amount of car paint:

75ml + 37.5ml + 375ml

= 487.5 ml

487.5 ml

(Total for Question 2 is 3 marks)

3 Airon is a festival promoter.

He says

"In 2019 I sold 105 276 tickets.
This is 7% less than the number of tickets I sold in 2018."

(a) How many tickets did Airon sell in 2018?

(3)

7% less = 100 − 7 = 93% of original amount.

93% = 0.93.

So 0.93 × tickets sold in 2018 = 105 276

Tickets sold in 2018 = 105276 ÷ 0.93

= 113 200

113 200

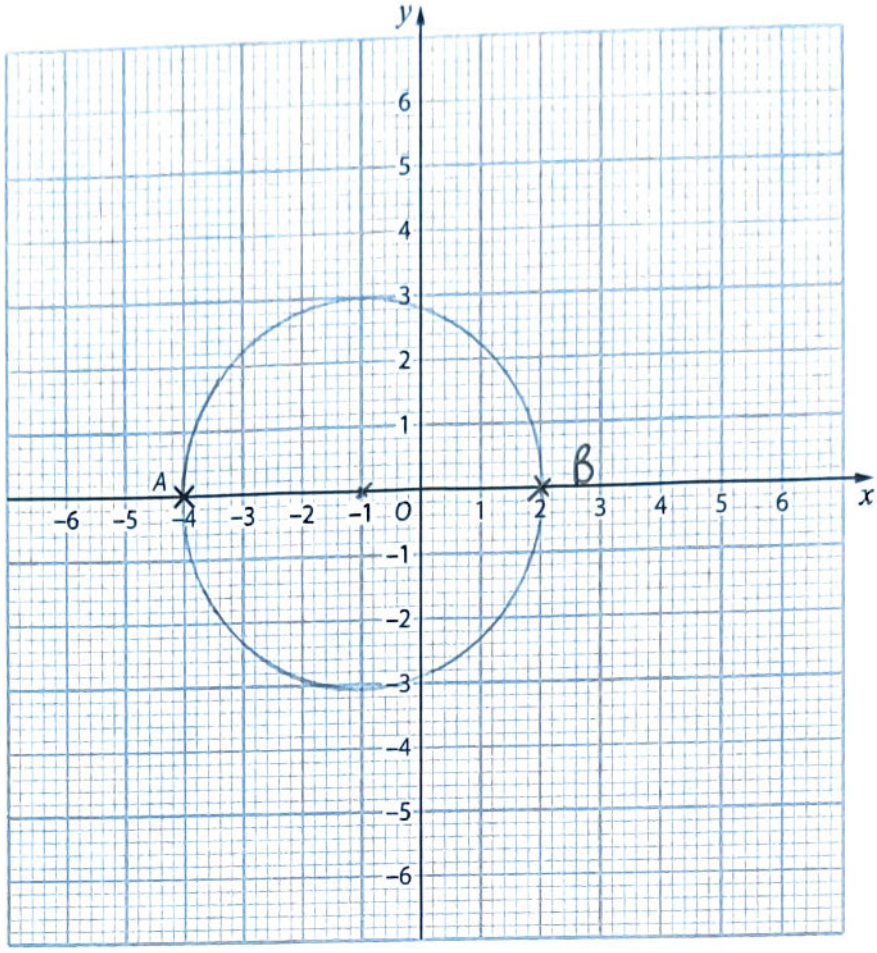
☑ (b) Show a check of your answer.

(1)

113 200 × 0.93 = 105 276.

(Total for Question 3 is 4 marks)

4



(a) Write down the coordinates of point *A*.

(1)

(−4 , 0)

B is the point (2, 0).

(b) On the grid draw a circle with diameter *AB*.

(2)

(Total for Question 4 is 3 marks)

Area of triangle: $\frac{0.7 \times 0.12}{2} = 0.042\ m^2$

Area of rectangle: $0.7 \times 0.63 = 0.441\ m^2$

Area of pentagon = $0.042 + 0.441 = 0.483\ m^2$

Area of front rectangle = $0.96 \times 0.63 = 0.6048\ m^2$

Total surface area of house:

$1.3824\ m^2 + 2(0.483\ m^2) + 2(0.6048\ m^2)$

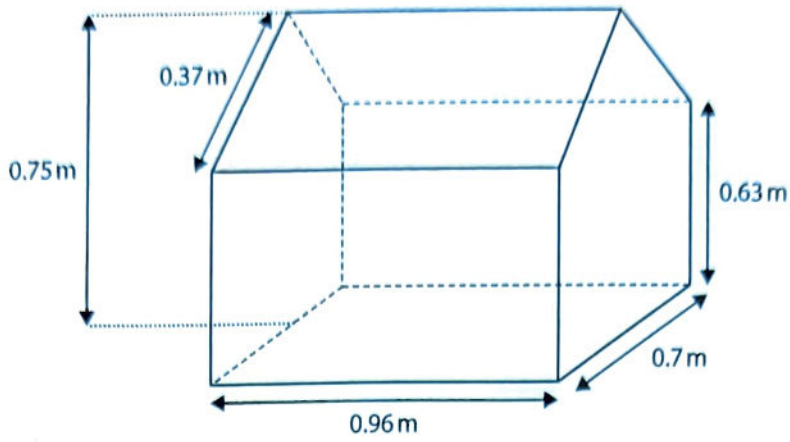
$= 1.3824 + 0.966 + 1.2096\ m^2$

$= 3.558\ m^2$

No Hey Jayden does not have enough paint.

(Total for Question 5 is 5 marks)

5 Here is a diagram of a dolls house Jayden has made.



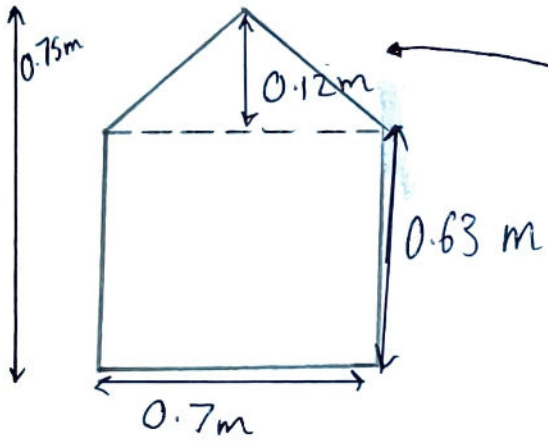
Two faces are each in the shape of a pentagon with a vertical line of symmetry.
All other faces are rectangular.
The base angles of each pentagon are right angles.

Jayden wants to cover all the surfaces of the dolls house with paint.
He knows the total area of the base and the roof is $1.3824\,m^2$

Jayden has enough paint to cover $3.5\,m^2$

Has Jayden got enough paint to cover all the surfaces of the dolls house?
Show why you think this.

(5)



0.75 − 0.63
= 0.12 m

Area of pentagon = area of triangle + area of rectangle.

6 Here is a formula.

$$m = \frac{2.67a}{4y}$$

Find the value of m when $a = 8$ and $y = 3.5$
Give your answer correct to 3 decimal places.

(3)

$m = \frac{2.67 \times 8}{4 \times 3.5} = \frac{21.36}{14}$

$= 21.36 \div 14 = 1.52571428$

$= 1.526$ (3 decimal places)

1.526

(Total for Question 6 is 3 marks)

7 Nikos owns a restaurant.

The table shows information about the number of customers that visited the restaurant on each of the 31 nights in August.

Number of customers	Frequency	midpoint	midpoint × frequency
1 – 15	2	8	16
16 – 30	7	23	161
31 – 45	12	38	456
46 – 60	10	53	530

The mean number of customers per night in July was 32

Nikos thinks the mean number of customers per night in August was more than the mean number of customers per night in July.

(a) Is Nikos correct?
Show why you think this.

(3)

Estimated mean in August $\neq \frac{530}{(2+7+12+10)} \frac{530}{31}$

$= \frac{16+161+456+530}{31} = \frac{1163}{31}$

$= 37.516129032258$

Yes Nikos is correct.

☑ (b) Show a check of your mean calculation.

(1)

$37.516129032258 \times 31$

$= 1163$

(Total for Question 7 is 4 marks)

8 Benji sells items in a shop and online.

In a survey he asked 100 people if they

- prefer to buy items in a shop or online
- are aged under 25 years, 25 to 40 years or over 40 years.

56 of the 100 people prefer to buy online. ⟶ Total no. of online
27 of the people aged under 25 years prefer to buy online.
12 of the 33 people aged 25 to 40 years prefer to buy in a shop.

Of the people aged over 40 years, 8 prefer to buy online and 17 prefer to buy in a shop.

One person who prefers to buy in a shop is chosen at random to win a prize.

(a) What is the probability that this person is aged under 25 years?
You **must** show your working.

(4)

	Under 25	25-40	Over 40	Total
Online	27	21	8	56
Shop	15	12	17	44
Total	42	33	25	100

- 56 prefer online, so 100 − 56 = 44 prefer Shop
- 12 of 33 prefer the shop (25-40 age)
  So 33 − 12 = 21 prefer online
- Total over 40 : 8 + 17 = 25
- No. under 25 who prefer to shop: 44 − 17 − 12 = 15

DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA DO NOT WRITE IN THIS AREA

• Total under 25 : 27 + 15 = 42

P(Someone who prefers to buy in a shop is under 25) = $\frac{15}{44}$

$\frac{15}{44}$

Yesterday Benji made

- 48 sales in the shop
- 76 sales online.

(b) What fraction of the total number of sales made yesterday were in the shop?
Write your fraction in its simplest form.

(2)

Total Sales: 48 + 76 = 124

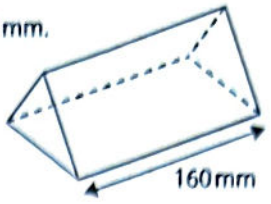
Fraction of sales in shop: $\frac{48}{124}$

$\frac{48}{124} = \frac{12}{31}$ (÷4)

$\frac{12}{31}$

(Total for Question 8 is 6 marks)

9 Maisie is designing packaging for a perfume bottle.
The packaging is in the shape of a triangular prism with length 160 mm.

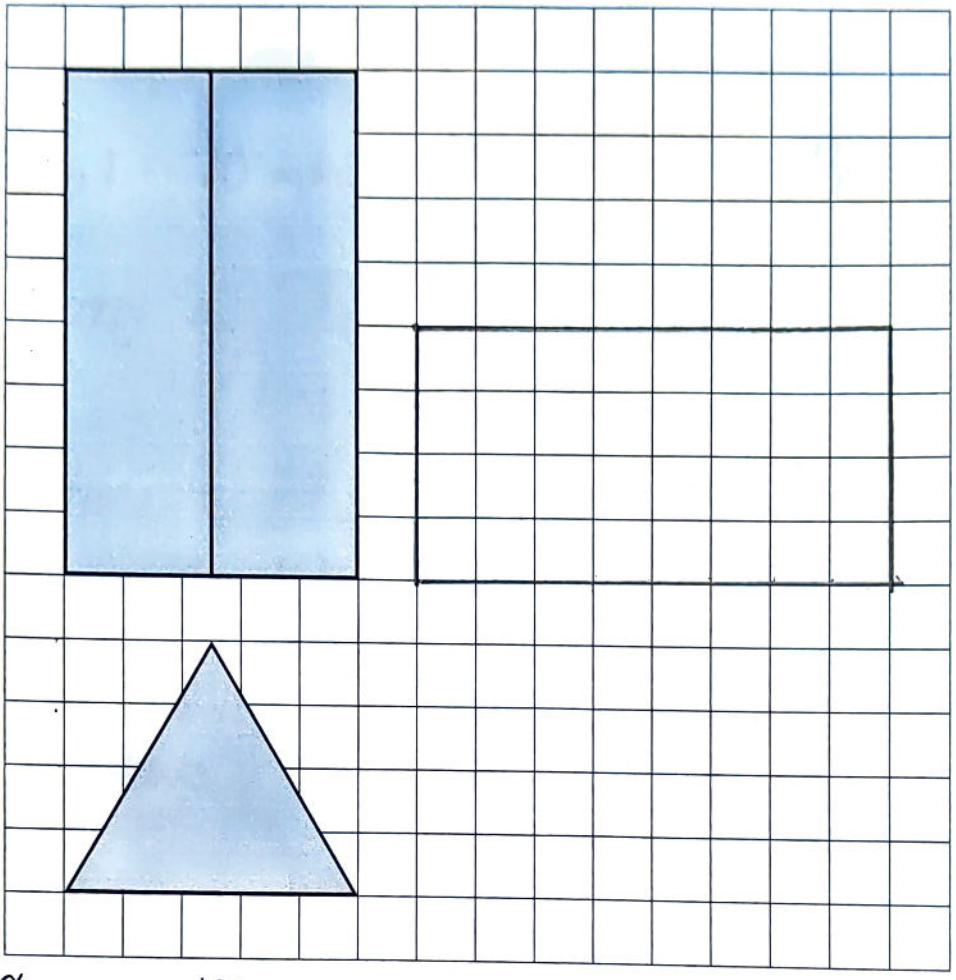


Maisie has drawn the front elevation and the plan of the prism on the centimetre grid below.

Maisie needs to draw the side elevation to complete the design drawings.

Draw the side elevation for Maisie.
Remember to complete the scale.

(3)



8 squares = 160 mm
1 square = 20 mm
= 2 cm

Scale 1: 2

(Total for Question 9 is 3 marks)

10 Lucia is driving to a meeting.
She needs to drive for 58 miles on the motorway.

The maximum speed limit on the motorway is 70 mph.
Lucia will not drive over the speed limit.

Work out the minimum time Lucia will spend driving on the motorway.
Give your answer correct to the nearest minute.

(3)

$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$

Speed = 70 mph, distance = 58 miles

$$70 = \frac{58}{\text{time}}$$

$$\text{time} = \frac{58}{70} = 58 \div 70 = 0.8285714 \text{ hours}$$

$$0.8285714 \text{ hours} = 0.8285714 \times 60 \text{ minutes}$$

$$= 49.714285 \text{ minutes}$$

50 minutes

(Total for Question 10 is 3 marks)

11 Matt and Gabrielle are planning their wedding.
There will be 150 people at the reception.

All of the tables at their reception

- seat a maximum of 8 people
- have a circular top of diameter 1.7 m

Matt and Gabrielle want to put ribbon around the top edge of each table.
They will allow for an extra 65 cm of ribbon per table for a bow.

Ribbon is sold in rolls.
Each roll of ribbon is 30 m in length.

How many rolls of ribbon do Matt and Gabrielle need to buy to decorate the minimum number of tables needed at their reception?

(5)

- no. tables needed: $150 \div 8 = 18.75$
  $= 19$ tables minimum.
- Circumference of each table:
  $\pi \times \text{diameter} = \pi \times 1.7 = 1.7\pi$ m
  $= 5.340707511$ m
- Need 65 cm more for each table:
  $5.340707511 + 0.65 = 5.990707511$
  m of ribbon for each table.
- Total ribbon needed:
  $19 \times 5.990707511 = 113.8234427$ m

No. rolls of ribbon needed:

$113.82344427 \div 30 = 3.794114757$ rolls

They will need 4 rolls

4

(Total for Question 11 is 5 marks)

12 Jana is writing a report about wages.

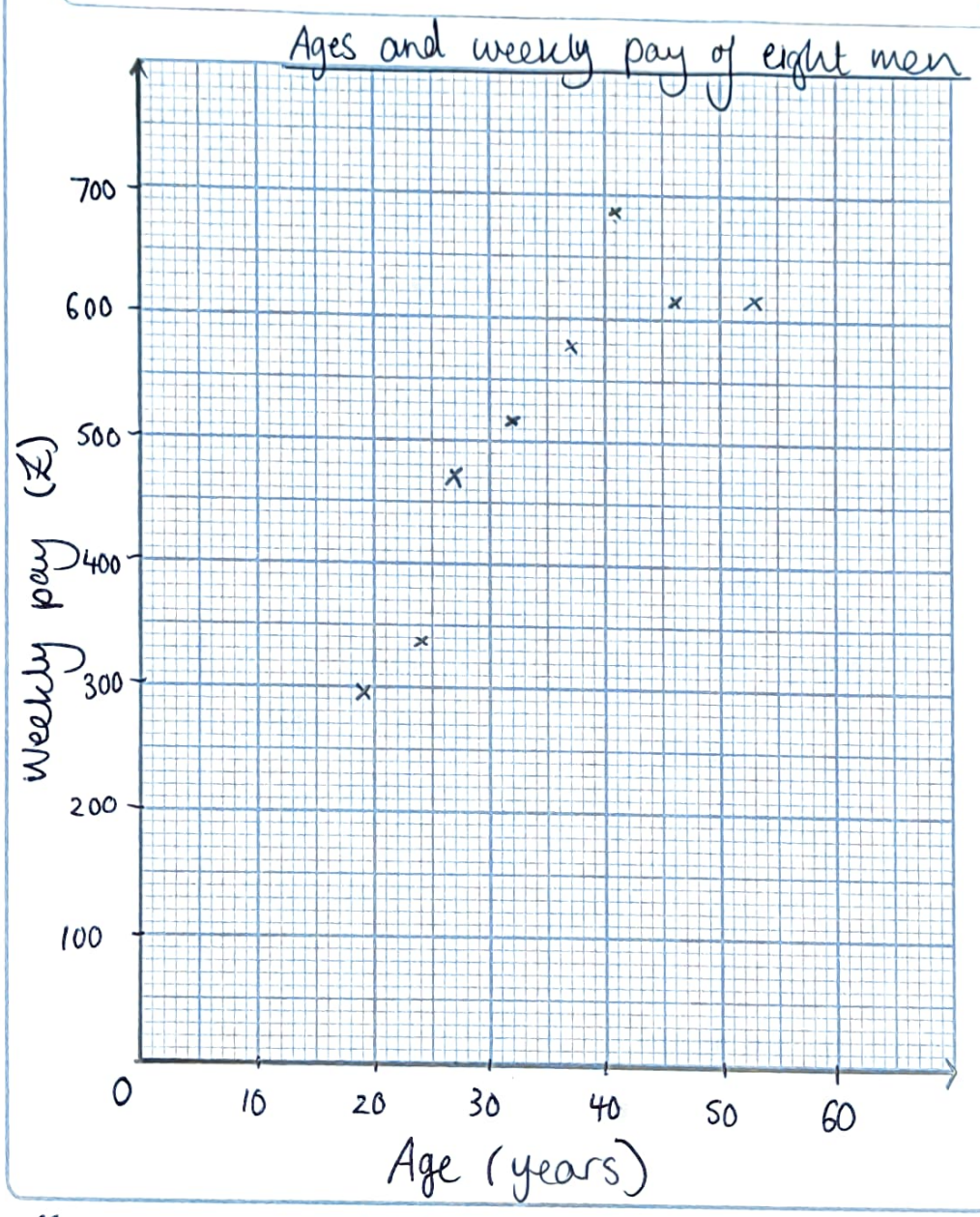
She has this information about the ages and weekly pay of eight men.

Age (years)	27	41	32	19	46	37	24	53
Weekly pay (£)	470	686	514	295	612	578	338	615

Jana wants to draw a diagram to see if there is a relationship between age and weekly pay for these eight men.

(a) Draw a suitable diagram for Jana.

(3)



(b) What type of correlation describes the relationship between age and weekly pay for these men?

(1)

positive correlation

Jana wants to compare the variation in weekly pay of men with the variation in weekly pay of women.

She finds the range of weekly pay for a sample of eight women is £437

(c) Write a comment comparing the variation in weekly pay for men and for women. Support your comment with a calculation.

(2)

range of weekly pay for men:
£686 − £295 = £391

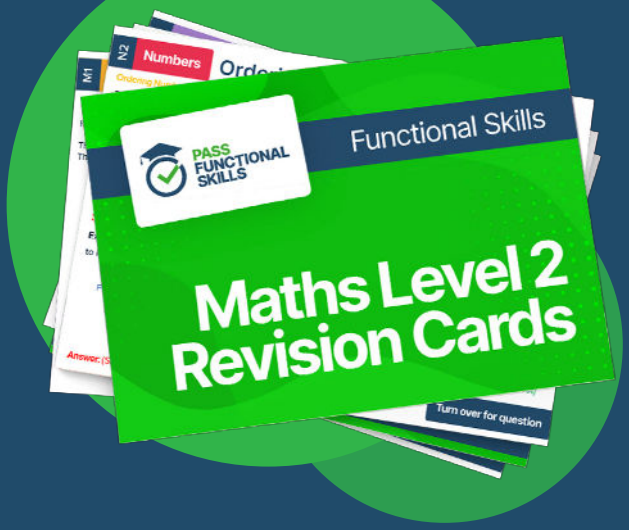
Pay for men has less variation since the range of pay for men (£391) is less than the range of pay for women (£437).

(Total for Question 12 is 6 marks)

TOTAL FOR SECTION B IS 48 MARKS
TOTAL FOR PAPER IS 64 MARKS

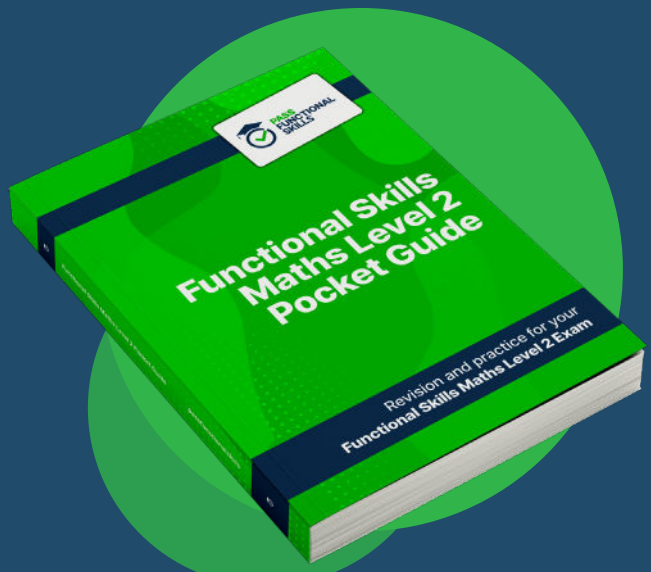
PASS FUNCTIONAL SKILLS

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
passfunctionalskills.co.uk