Name	Date started	Target end date

WJEC GCSE Mathematics and Numeracy (Double Award) — Question Pack

Place value, decimal columns, rounding to a given number of decimal places or significant figures, and writing answers to a stated degree of accuracy.

REVISE
.wales

2.01 — Place value, rounding & significant figures

Spec 1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.5 — Unit 2 (no calculator)

Place value, decimal columns, rounding to a given number of decimal places or significant figures, and writing answers to a stated degree of accuracy. Sourced from legacy WJEC GCSE Mathematics Higher non-calculator papers, organised for revision under the 2025 spec.

2025 SPECIFICATION

Estimated time for entire question pack: ~3 hours 38 minutes

*Derived from the GCSE Higher pace of **~1.5 min/mark** (145 marks across 37 questions).*

*You are advised to **not** attempt to complete all of this in one sitting.*

ABOUT THIS QUESTION PACK

This is a **focused single-topic practice pack**, not a single mock paper. Questions are organised against the 2025 specification. Questions are ordered chronologically by sitting, with custom-written and SAM questions at the end.

INSTRUCTIONS

Use black ink or black ball-point pen. Show all working — method marks are awarded for clear setup.

*A calculator is **not** permitted on any question in this pack (Unit 2 is the non-calculator paper).*

Place value, rounding & significant figures — what the new spec asks

WJEC GCSE Mathematics (first teaching 2025) · Unit 2: non-calculator.

Place value 1.1.1

- Decimal columns: tens, units, tenths, hundredths, thousandths.
- Each column is ten times the next.
- Read large and small numbers fluently in decimal form.

Rounding to dp 1.1.4

- Round to a stated number of decimal places.
- ≥ 5 in the next column rounds up.
- Keep trailing zeros if needed: 3·40 (2 dp), not 3·4.

Significant figures 1.1.5

- First sig fig = first non-zero digit.
- Trailing zeros in whole numbers are placeholders, not sig figs.
- 0·00 427 to 2 sf = 0·0043.

Estimating 1.1.3

- Round each value to 1 sf, then compute.
- Use estimates to sense-check calculator answers.
- State whether your estimate is too high or too low.

Crib sheet »

Place value, rounding & significant figures in one page

Quick-reference notes — revisit before each question. Don't use during the questions.

Place-value columns

Each column is ten times the next: … thousands, hundreds, tens, units · tenths, hundredths, thousandths.

0·0742: 0 units, 0 tenths, 7 hundredths, 4 thousandths, 2 ten-thousandths.

Decimal places (dp)

"Round to n dp" keeps n digits after the point.

Look at the next digit: ≥ 5 rounds up, < 5 rounds down.

3·14159 → 3·14 (2 dp) → 3·142 (3 dp).

Significant figures (sf)

First sig fig = first non-zero digit.

0·00427 to 2 sf = 0·0043 (leading zeros don't count).

3047 to 2 sf = 3000 — trailing zeros are placeholders.

Estimating

round each value to 1 sf, then compute

$$\frac{30 \cdot 21 \times 1 \cdot 983}{0 \cdot 49} \approx \frac{30 \times 2}{0 \cdot 5} = 120.$$

Sense-check calculator answers against the estimate.

Rounding rules of thumb

- 5 rounds up by convention.
- Round once — never round a rounded value.
- State the degree of accuracy in your answer.

Common traps

- Mixing dp with sf.
- Forgetting trailing zeros are placeholders, not sig figs.
- Rounding 0·0496 to 2 sf ⇒ 0·050, not 0·05.

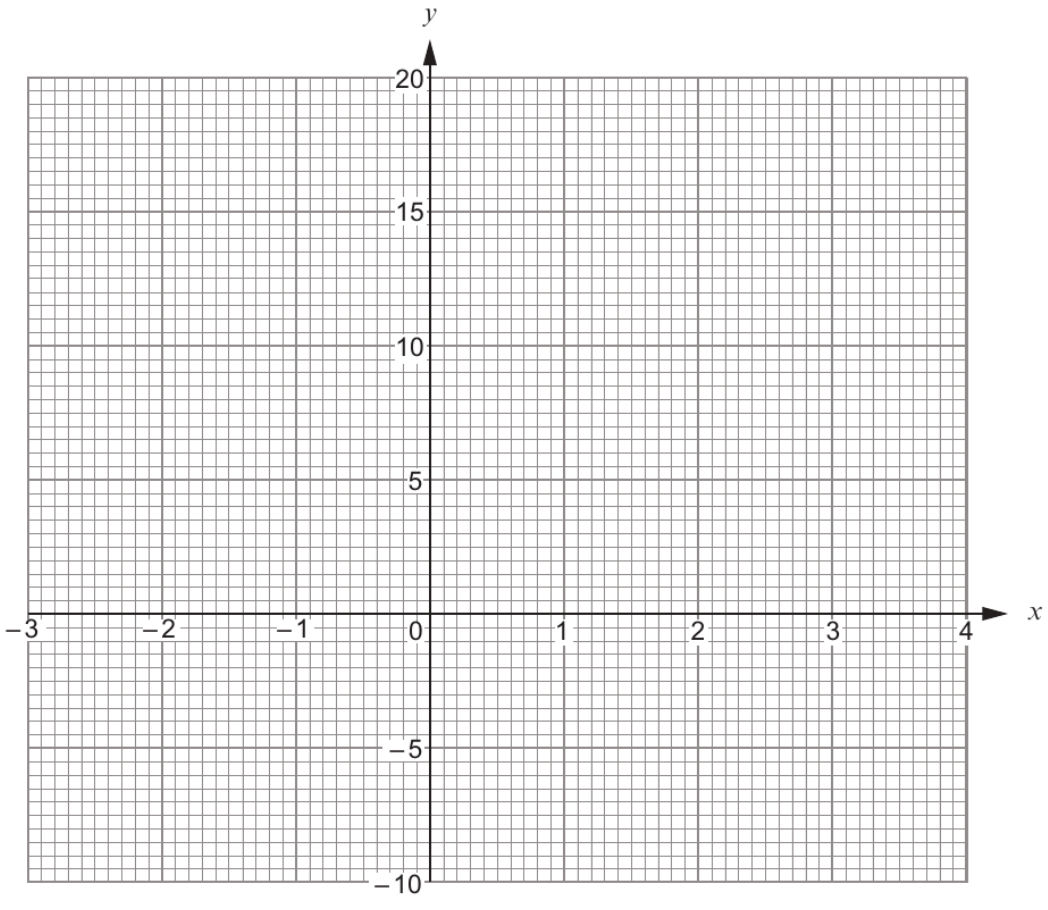
Examiner only

2. *(a)* The table below shows some of the values of $y = 2x^2 - 5x - 1$ for values of x from –2 to 4.

Complete the table by finding the value of y for $x = -1$ and for $x = 2$. [2]

x	−2	−1	0	1	2	3	4
$y = 2x^2 - 5x - 1$	17		−1	−4		2	11

(b) On the graph paper below, draw the graph of $y = 2x^2 - 5x - 1$ for values of x from –2 to 4. [2]



Examiner only

(c) Draw the line $y = 5$ on the graph paper.

Write down the values of x where the line $y = 5$ cuts the curve $y = 2x^2 - 5x - 1$.
Give your answers correct to 1 decimal place. [2]

Values of x are ..... and .....

(d) Circle the equation below whose solutions are the values you have given in *(c)*. [1]

$2x^2 - 5x - 1 = 0$ $2x^2 - 5x - 6 = 0$ $2x^2 - 5x - 5 = 0$

$2x^2 - x - 1 = 0$ $2x^2 - 5x + 4 = 0$

Examiner only

3.

Stylish computer desk Made of laminate wood. Non-scratch top. **Length is exactly 2000 mm**	

Luc wants this new desk for his bedroom.

The desk is to fit on the straight wall between his wardrobe and his bookcase.

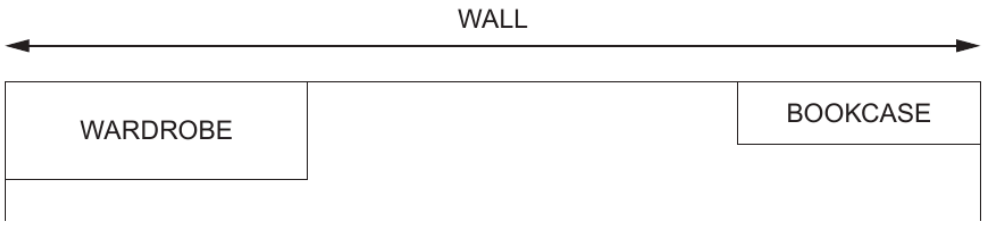


Diagram not drawn to scale

Luc has measured the length of

- the wall, which is 600 cm, correct to the nearest 10 cm,
- the bookcase, which is 147 cm, correct to the nearest 1 cm,
- the wardrobe, which is 250 cm, correct to the nearest 1 cm.

(a) What is the greatest possible length of the wall?
Circle your answer. [1]

600 cm 605 cm 645 cm 610 cm 650 cm

(b) What is the least possible length of the wardrobe?
Circle your answer. [1]

249 cm 249·45 cm 249·49 cm 249·5 cm 250 cm

Examiner only

(c) Can Luc be certain that this desk will fit in the space available?

You must
- show all your calculations,
- give the greatest or least bounds of any measurements used in calculations or comparisons,
- give a reason for your answer. [5]

Examiner only

3. The wire window guard shown below is to be made.

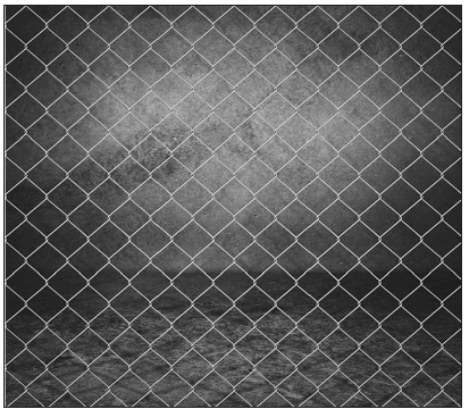


Diagram not drawn to scale

The length of the sides of each small wire square shown is 3·3 cm.

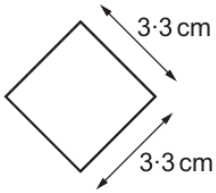


Diagram not drawn to scale

Llinos considers the length of the diagonal of each small square.

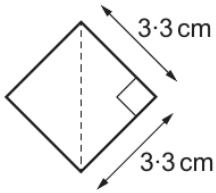


Diagram not drawn to scale

She says,

> The height of the window guard is equal to 9·5 diagonals of the square.
> The width of the window guard is equal to 11 diagonals of the square.

Examiner only

(a) Calculate the length of the diagonal of a small square.
Give your answer correct to 1 decimal place. [3]

(b) Calculate the area of the **window guard**.
You must show all your working. [3]

Examiner only

3.

Stylish computer desk Made of laminate wood. Non-scratch top. **Length is exactly 2000 mm**	

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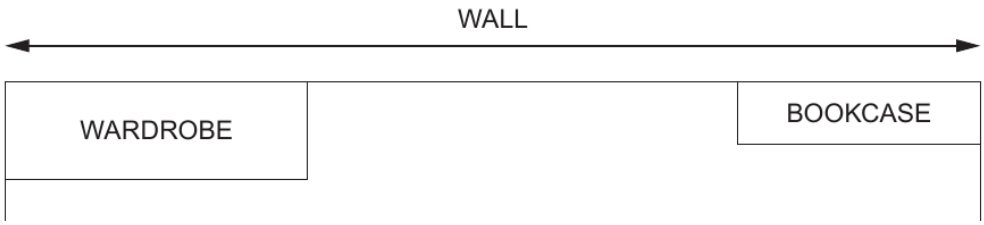
The desk is to fit on the straight wall between his wardrobe and his bookcase.



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(b) What is the least possible length of the wardrobe?
Circle your answer. [1]

249 cm 249·45 cm 249·49 cm 249·5 cm 250 cm

Examiner only

(c) Can Luc be certain that this desk will fit in the space available?

You must
- show all your calculations,
- give the greatest or least bounds of any measurements used in calculations or comparisons,
- give a reason for your answer. [5]

Examiner only

5. Rhodri has carried out an experiment to measure the diameters of 20 spherical dust particles, in microns.

Here are his results.

Diameter, d (microns)	Frequency
$1 \leqslant d < 2$	2
$2 \leqslant d < 4$	6
$4 \leqslant d < 5$	8
$5 \leqslant d < 9$	4

(a) (i) Calculate an estimate of the mean diameter of a dust particle. [4]

(ii) Rhodri measures the diameters of another 25 dust particles.

Rhodri is told,

'The ratio of dust particles with diameters less than 4 microns to those with diameters greater than or equal to 4 microns is 7 : 8.'

He finds this fact is true when he considers all 45 dust particles.

How many of the extra 25 dust particles have a diameter of less than 4 microns? You must show your working. [3]

Examiner only

(b) Rhodri studies a cylindrical cell under his microscope.
The height of the cell is 2 microns.
The circumference of the cell is 5 microns.

Calculate the volume of the cell he sees under the microscope.
Give your answer in microns^3, correct to 1 significant figure. [5]

Volume is ..... microns^3

Examiner only

1. *(a)* Calculate $\sqrt{8{\cdot}5^3 + (4{\cdot}5 - 0{\cdot}76)^2}$, correct to 3 significant figures. [2]

(b) Calculate the reciprocal of $-0{\cdot}07$, correct to 1 decimal place. [2]

2. Show that the triangle below is **not** a right-angled triangle. [5]

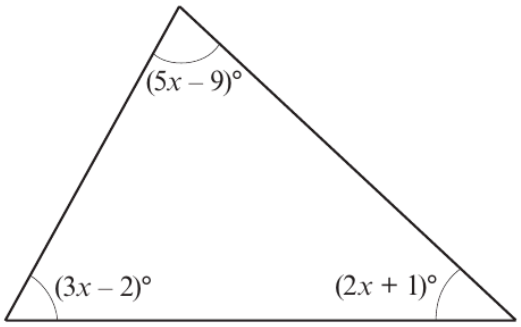


Diagram not drawn to scale

Examiner only

2. The table below shows some of the values of $y = x^2 - 5x + 2$, for values of x from -1 to 5.

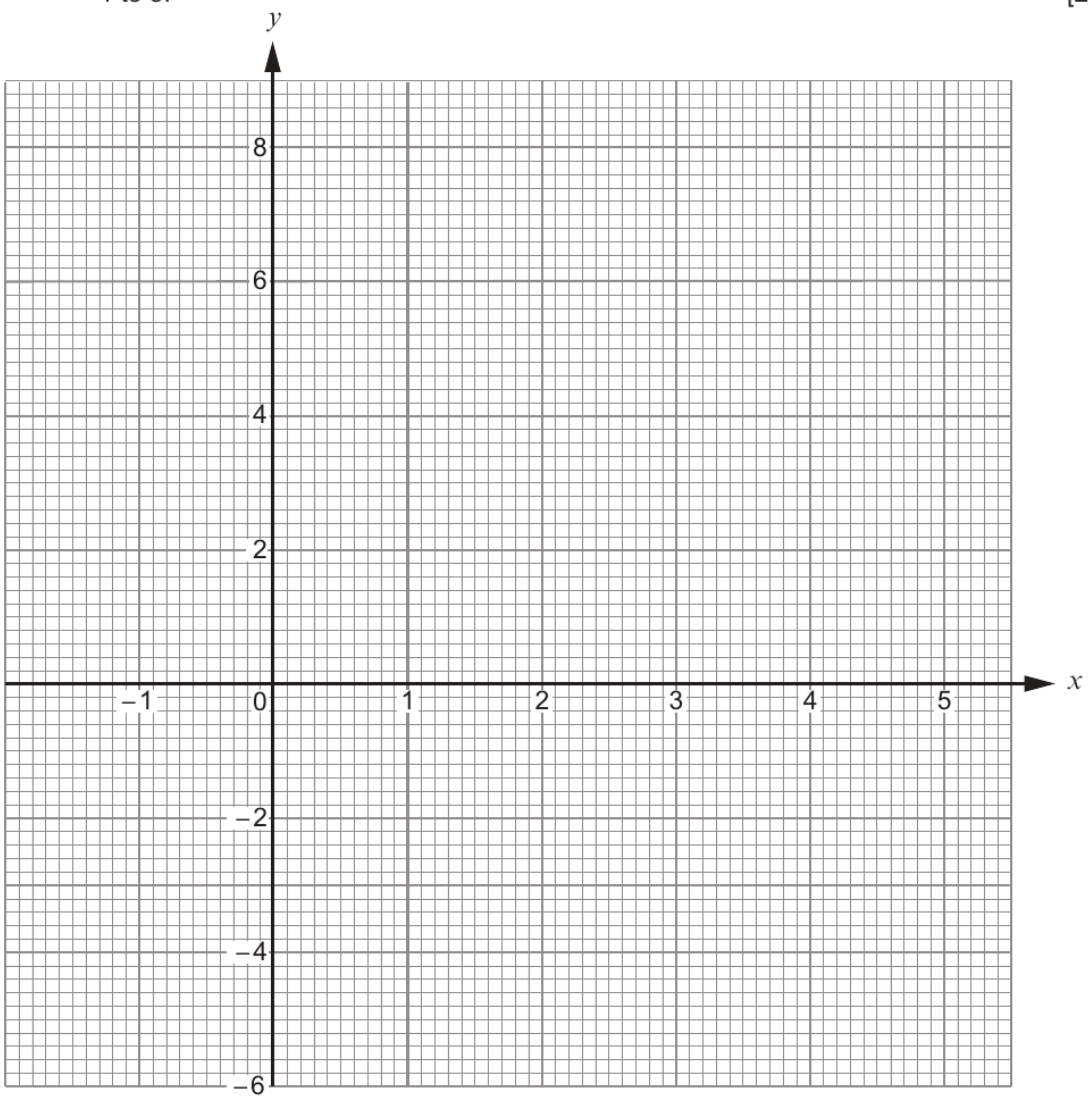
x	-1	0	1	2	3	4	5
$y = x^2 - 5x + 2$	8	2	-2	-4		-2	2

(a) Complete the table above. [1]

.....

.....

(b) On the graph paper below, draw the graph of $y = x^2 - 5x + 2$ for values of x from -1 to 5. [2]



Examiner only

5. Marta buys a new television.

(a) Marta wants to fit the television in a bookcase on the wall.
In the shop she forgot to write down the length of the television.
She did write down the height and the diagonal of the screen.

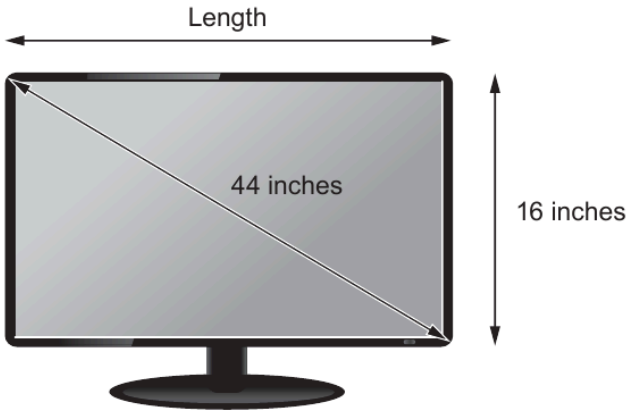


Diagram not drawn to scale

Marta needs to know the length of the screen before she opens the box, in case she wants to return the television.
Calculate the length of the screen.
Give your answer correct to 2 significant figures. [4]

Length is ..... inches, correct to 2 significant figures.

Examiner only

(b) The television was reduced in the sale by 26% of its original price.
It cost Marta £710.40 in the sale.
What was the original price of the television? [2]

Original price £ .....

(c) A television uses 1 unit of electricity every 10 hours.
A unit of electricity costs 9.8 p.

(i) Calculate the cost of having a television turned on for 24 hours.
Circle your answer. [1]

£23.52 £2.35 40.83 p 23.52 p 2.45 p

(ii) On average, Marta watches 4 hours of television each day.
On average, how much **a week** does it cost her to watch television?
Circle your answer. [1]

27.44 p £27.44 £39.20 39.2 p 10.78 p

Examiner only

3. *In this question, you will be assessed on the quality of your organisation, communication and accuracy in writing.*

Handmade socks, knitted using pure cashmere wool, are very expensive to buy.

Rowena buys cashmere wool in 20 g balls.
Each ball of cashmere wool costs her £1.42.
She pays her sister £8 to knit each pair of socks.
135 g of cashmere wool is used to knit each pair of socks.

Rowena sells 40 pairs of cashmere socks for £18.95 per pair.
What is her percentage profit?
Give your answer correct to 2 significant figures.
You must show all your working.

[7 + 2 OCW]

Rowena's percentage profit when selling all 40 pairs of socks is ..... %, correct to 2 significant figures.

Examiner only

12. The area of a rectangle is 137 cm^2, correct to the nearest cm^2.
Its width is 11 cm, correct to the nearest cm.

Calculate the greatest possible length of the rectangle.
Give your answer correct to 3 significant figures. [2]

13. A bag contains 5 red counters and 5 blue counters.
Three counters are drawn at random from the bag at the same time.
Calculate the probability that the three counters will be the same colour. [3]

Examiner only

1. *(a)* Calculate $\dfrac{145{\cdot}3}{(12{\cdot}4 - 9{\cdot}8)^3}$, giving your answer correct to 3 significant figures. [2]

(b) Calculate the reciprocal of 47, giving your answer correct to 4 decimal places. [2]

2. Circle the correct answer in each of the following.

(a) Which of the following values **cannot** be an external angle of a regular polygon? [1]

10° 18° 30° 48° 72°

(b) An arrow on a spinner is facing north.
It is turned clockwise through an angle of 1530°.
In which direction will the arrow now be facing? [1]

North East South West None of these

(c) Point *A* is on a bearing of 100° from point *B*.
What is the bearing of point *B* from point *A*? [1]

260° 100° 280° 180° 80°

Examiner only

3. Yared is going to make a door wedge.

(a) The cross-section of the wedge is shown below.
The horizontal length is 12 cm and the vertical height is 3 cm.

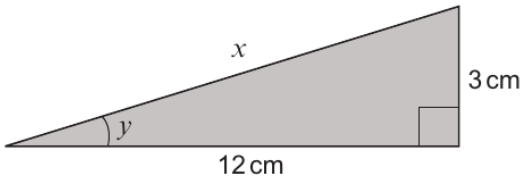


Diagram not drawn to scale

(i) Calculate the length x.

Give your answer correct to 3 significant figures. [4]

x = ... cm

(ii) The wedge must fit under Yared's door.
The angle y must be less than 15°.
Show that this wedge will fit under Yared's door.
You must show all your working. [3]

Examiner only

(b) Yared decides to make a larger wedge that is mathematically **similar** to the one shown in part *(a)*.
This wedge is to have a vertical height of 4·5 cm.

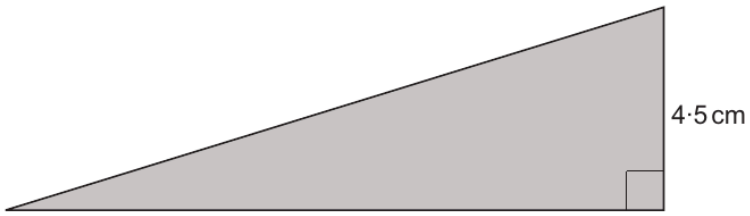


Diagram not drawn to scale

Calculate the horizontal length of this door wedge. [2]

The wedge will be ..... cm long

Examiner only

8. The Headteacher of Ysgol Castell Gwyn wants to display pictures, drawn by pupils, along one side of a corridor.
The pictures are to be in one row with no gaps between them, as shown in the diagram below.

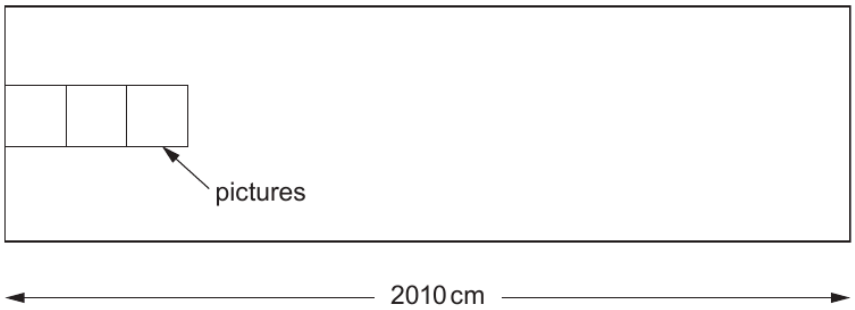


Diagram not drawn to scale

The pictures are all square, with sides of length 15 cm, correct to the **nearest 0·5 cm**.
The length of the corridor wall is 2010 cm, correct to the **nearest 10 cm**.

Calculate the smallest number of pictures and the greatest number of pictures that can be fitted in the row. [5]

Smallest number of pictures	Greatest number of pictures
.....	.....

Examiner only

10. Astronomers use astronomical units (AU) to describe distances in our solar system.
The distance between the Sun and the Earth is 1 AU.
1 AU is $1{\cdot}496 \times 10^8$ km, correct to 4 significant figures.

(a) The distance of Pluto from the Sun is $5{\cdot}913 \times 10^9$ km, correct to 4 significant figures.

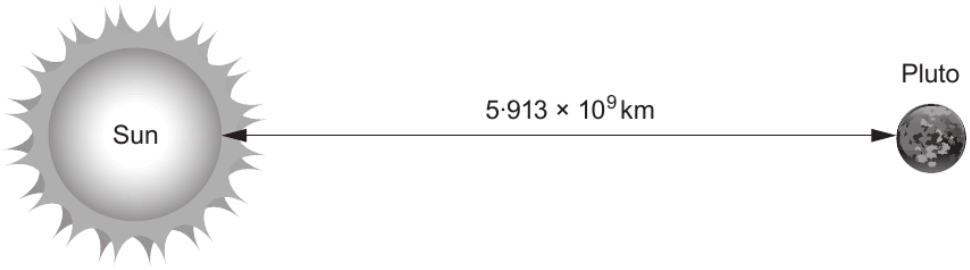


Diagram not drawn to scale

Siôn says that the distance of Pluto from the Sun is less than 50 AU.

Using **suitable** approximations, estimate the distance of Pluto from the Sun, in AU, to show that Siôn is correct.
You must show all your working. [2]

(b) A light year is the distance light travels in one year.

1 light year is approximately 63 000 AU.

Estimate the length of a light year in km.
Give your answer in standard form. [3]

Examiner only

11. A sensor can detect any movement up to a distance of 6·5 m.

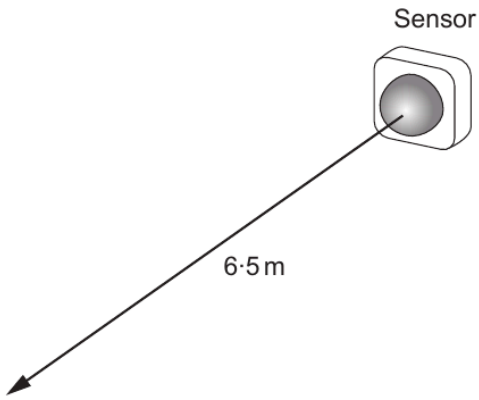


Diagram not drawn to scale

(a) A storeroom is in the shape of a cuboid, as shown below.
The sensor is placed at *A*, so that

- it is aimed directly at *B*, where *BD* = 2 m,
- the front of the sensor is 20 cm from *A* along the line *AB*.

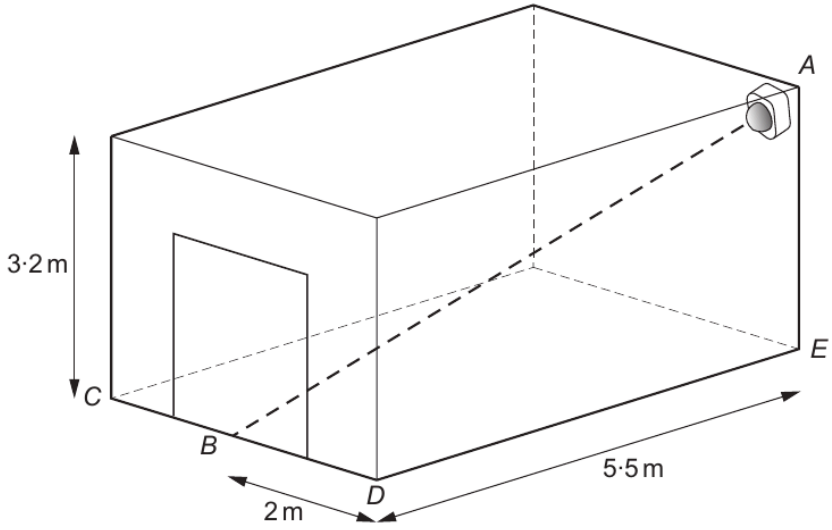


Diagram not drawn to scale

Will the sensor be able to detect movement at *B*?
You must show all your working. [5]

.....

.....

.....

Examiner only

(b) Show that $B\hat{A}E = 61{\cdot}3°$, correct to 1 decimal place. [3]

END OF PAPER

Examiner only

13. The values $a = 27$, $b = 1{\cdot}9$ and $c = 0{\cdot}81$ are each correct to 2 significant figures.

Use the formula $d = \frac{a-b}{c}$ to calculate the **least** value of d.

You must show all your working. [3]

Examiner only

14. The diagram below shows a cuboid with $HG = 3\,\text{cm}$, $AE = 5\,\text{cm}$ and $EH = 7\,\text{cm}$.

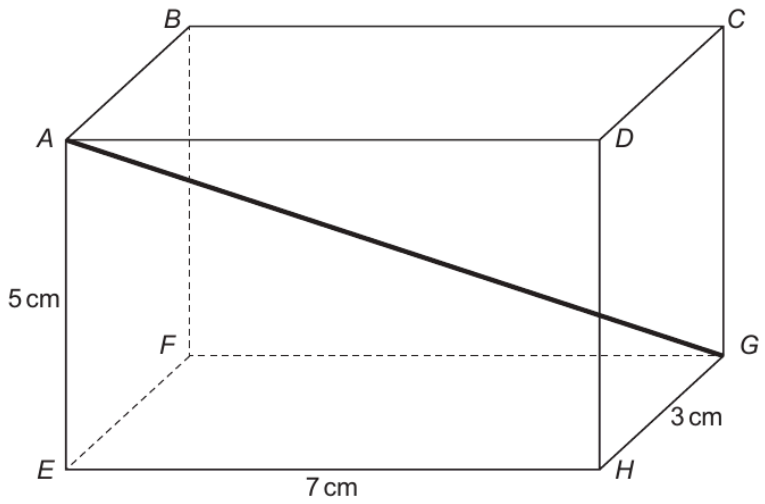


Diagram not drawn to scale

Calculate the length of the line AG.
Give your answer correct to 2 decimal places. [4]

Examiner only

1.

Wales are to play Ireland in an international rugby match.

The rugby pitch at the stadium is measured.
On the diagram below, each measurement is given **correct to the nearest 10 centimetres**.

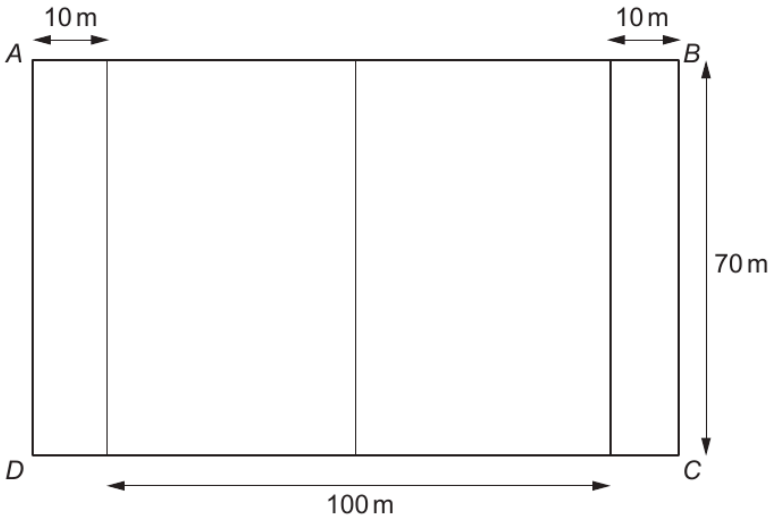


Diagram not drawn to scale

What is the least possible length of *AB*?
Give your answer in metres.
You must show all your working. [3]

Examiner only

5. Estimate the value of

$$\frac{30{\cdot}21 \times 1{\cdot}98^3}{0{\cdot}49}$$

[3]

Examiner only

4. *(a)* Which one of the following options describes $2x + 5y$?
Circle your answer. [1]

an equation a formula an expression

an inequality none of these

(b) Which one of the following options describes $3x - 2 = 7$?
Circle your answer. [1]

an equation a formula an expression

an inequality none of these

5. Data for different values of t are shown in the table below.

t	Frequency
$0 \leqslant t < 5$	8
$5 \leqslant t < 10$	0
$10 \leqslant t < 15$	7
$15 \leqslant t < 20$	5

Calculate an estimate for the mean value of t. [4]

Examiner only

11. The table below shows the value of d and the value of e.
It also shows the degree of accuracy of each value.

Value	Degree of accuracy
$d = 64$	Nearest whole number
$e = 8{\cdot}6$	1 decimal place

Use the formula

$$c = \frac{d^2}{e}$$

to calculate the **least** possible value of c.

You must show all your working. [3]

Examiner only

10. The value of y is found using the formula $y = \frac{t}{w}$.

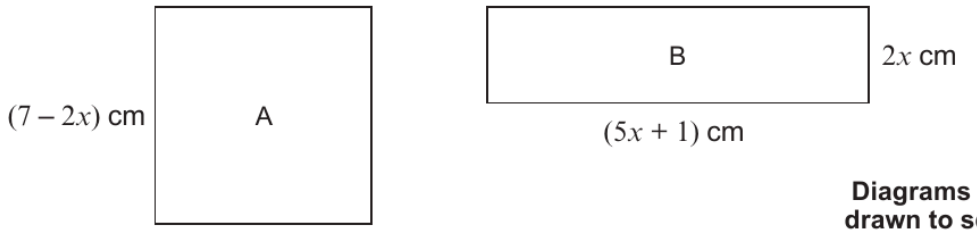
t = 98, correct to 2 significant figures.
w = 0·5, correct to 1 significant figure.

Calculate the **least** value of y.
Give your answer correct to 1 decimal place.
You must show all your working. [3]

Least value of y = ...

Examiner only

16. Shape A is a square and Shape B is a rectangle, as shown below.



Diagrams not drawn to scale

The area of square A is equal to the area of rectangle B.

Form an equation in x and hence calculate the value of x.
Give your answer correct to 1 decimal place.
You must show all your working. [6]

x = ...

Examiner only

3. (a) 10 years ago, Matteo bought a car for £4500.
His car depreciated in value by 20% in the **first** year.
In each of the following years, his car depreciated by 14% of its previous year's value.

Show that the value of Matteo's car is now less than £950.

You must show all your working. [3]

(b) Matteo's car insurance has increased by 25% from the amount he paid last year.
His car insurance is £750 this year.

Calculate the amount Matteo paid for his car insurance last year. [2]

Matteo paid £ ..... for his car insurance last year.

Examiner only

(c) The diagram below shows the front of Matteo's garage.

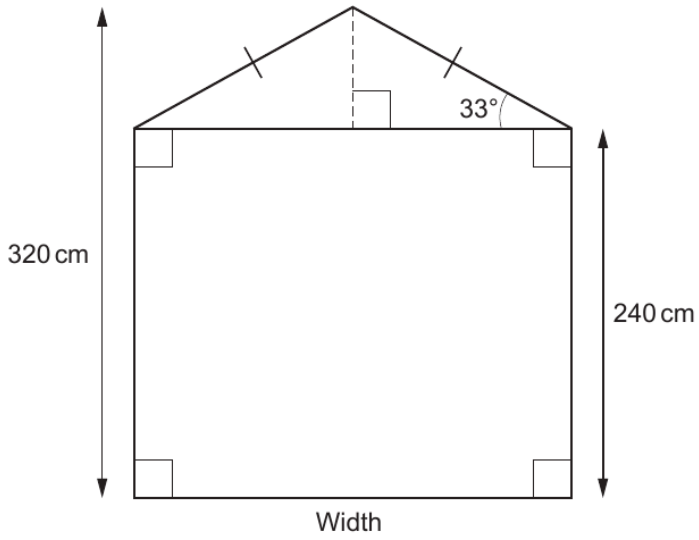


Diagram not drawn to scale

Calculate the width of Matteo's garage. [5]

Examiner only

(d) The length of Matteo's car is 400 cm, correct to the **nearest 10 cm**.
The length of his garage is 550 cm, correct to the **nearest 10 cm**.

When Matteo parks his car, he leaves exactly 70 cm between the car and the back wall of the garage.

Calculate the maximum length of the space between Matteo's car and the garage door.
[3]

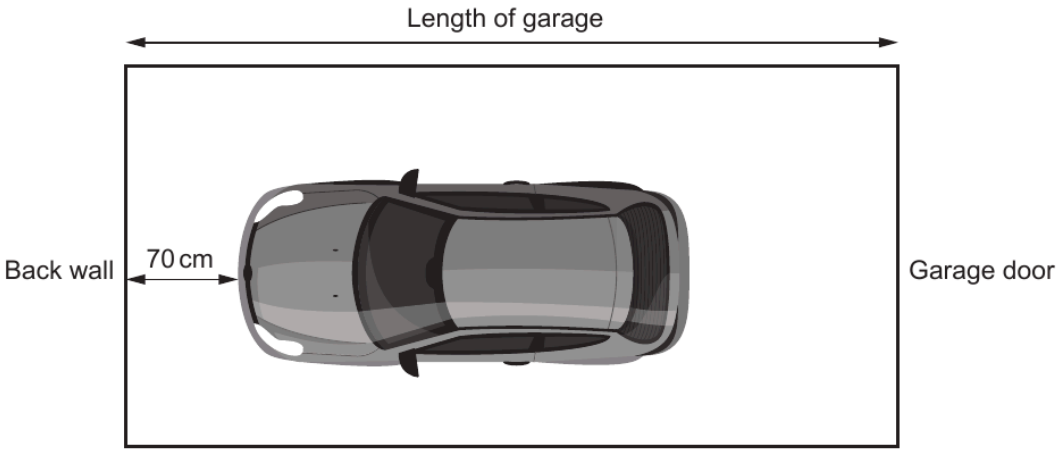


Diagram not drawn to scale

Examiner only

4. (a) Evaluate $\frac{\sqrt[3]{154}}{7 \cdot 9 - 3 \cdot 26}$.

Give your answer correct to 2 significant figures. [2]

(b) Calculate the reciprocal of 23.
Give your answer correct to 3 decimal places. [2]

(c) Circle the correct answer for each of the following.

(i) The Lowest Common Multiple (LCM) of 4 and 6 is:

2 4 6 12 24

[1]

(ii) The Highest Common Factor (HCF) of 10 and 15 is:

5 10 15 30 150

[1]

Examiner only

6. Two time periods are measured as 4 hours 40 minutes and 2 hours 50 minutes.
Each measurement is correct to the nearest 10 minutes.

What is the least possible sum of these two time periods?
Give your answer in hours and minutes. [3]

Answer = ... hours ..... minutes

Examiner only

3. Jac is planning to visit the Empire State Building in New York.

(a) Planners had an original budget of $60 million to construct the Empire State Building.
It actually cost $41 000 000 to construct.

Complete the following statement.
Give your answer correct to 2 decimal places. [3]

Constructing the Empire State Building cost ..... % less than the original budget.

(b) More than 4 million people visit the Empire State Building each year.
What is 4 million written in standard form?
Circle your answer. [1]

4×10^{-5} $0\cdot4\times10^{5}$ 4×10^{5} 4×10^{6} 4×10^{7}

Examiner only

(c) *In this part of the question, you will be assessed on the quality of your organisation, communication and accuracy in writing.*

The conversion rate at the exchange shop is £1 = $1.25.
The exchange shop only has $10 notes and $50 notes.

Jac has exactly £350.
He wants to exchange as close to £350 as possible for US dollars ($).
He asks for as **few** notes as possible.

Calculate:
- how many $10 notes and how many $50 notes Jac gets
- how much he pays for his currency.

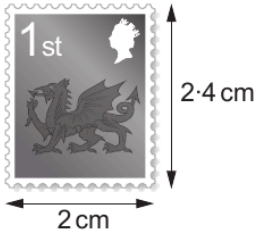
You must show all your working. [6 + 2 OCW]

Examiner only

6. *In this question, you will be assessed on the quality of your organisation, communication and accuracy in writing.*

An old postage stamp has a width of 2 cm and a height of 2·4 cm.
Frank makes a poster that is **mathematically similar** to the postage stamp, as shown below.

Postage Stamp



Poster

Diagrams not drawn to scale

He places a thin tape along the four edges of the poster.
Calculate the total length of this tape, correct to 1 significant figure.
You must show all your working. [4 + 2 OCW]

Examiner only

8. Form-A-Part is a company that makes metal parts for use in engineering.

(a) A metal part is made from a circular disc with a piece cut out.
The part has uniform thickness, a diameter of 60 mm, and centre O.
The diagram below shows the cross-section of the metal part.

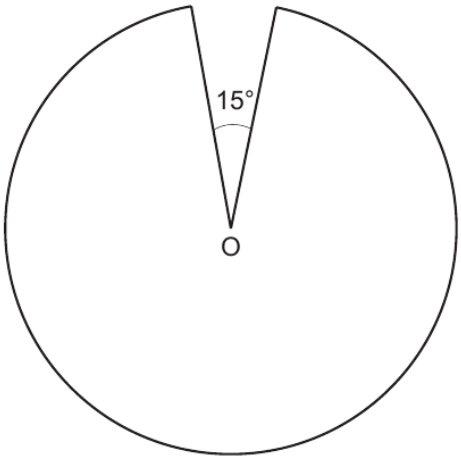


Diagram not drawn to scale

Calculate the perimeter of the cross-section of this metal part.
Give your answer correct to the nearest millimetre. [3]

Perimeter of the metal part is ..... mm, correct to the nearest millimetre.

Examiner only

(b) The diagram below shows a metal part made by Form-A-Part.
Each part consists of a cone sitting on top of a hemisphere.
The diameter of the base of the cone and the diameter of the hemisphere are equal.

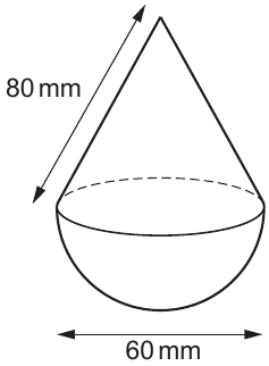


Diagram not drawn to scale

A customer has ordered 20 000 of these parts.

Form-A-Part has guaranteed that they will make all of the parts with the measurements shown in the diagram being **correct to the nearest mm**.

All 20 000 parts will be given a protective coating that comes in tins.
Each tin covers an area of 4 000 000 mm^2, **correct to the nearest 100 000 mm^2**.

Form-A-Part must **guarantee** that they have enough tins of protective coating to coat all 20 000 parts.
Calculate the minimum number of tins they will need.
You must show all your working. [6]

Minimum number of tins needed to guarantee having enough coating = ...

Examiner only

(c) Form-A-Part has decided to randomly sample these 20 000 metal parts to check their quality.

Use the following list of random numbers to select the first 5 parts for the sample.
You must start with the first number in the list.
Explain clearly how you are using the numbers to select the sample. [3]

66923	01325	58552	86923
48925	72712	58033	18266
95775	51056	01325	81036
05929	10429	26883	45630
88925	24800	02891	38441

The 5 parts selected will be

1st ..... 2nd ..... 3rd .....

4th ..... 5th .....

Examiner only

15. The values $b = 23$, $c = 0{\cdot}73$ and $d = 8{\cdot}3$ are each given correct to 2 significant figures.

Use the formula

$$a = b - \frac{c}{d}$$

to calculate the greatest possible value of a.
Give your answer correct to 2 decimal places.
You must show all your working. [3]

Examiner only

1. (a) Write the reciprocal of 4 as a decimal. [1]

(b) Estimate the value of $\frac{79{\cdot}34}{40{\cdot}1 \times 0{\cdot}48}$.

You must show all your approximations in your working. [2]

(c) Evaluate

$$1\frac{5}{7} + 2\frac{11}{14}.$$

Give your answer in its simplest form. [3]

Examiner only

14. Triangle ABC has sides AB = 24·1 cm and AC = 17·9 cm, as shown below.
$B\hat{A}C = 37°$.

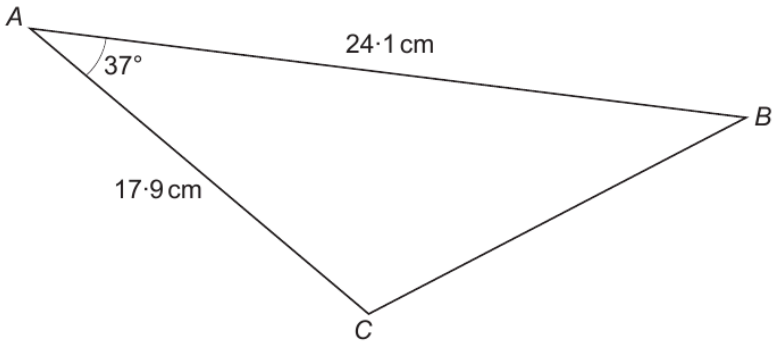


Diagram not drawn to scale

Calculate the area of the triangle ABC. [2]

15. The values e = 7·1, f = 73·9 and g = 65·7 are each given correct to 1 decimal place.

The value of h is found using the formula $h = \dfrac{e}{f - g}$.

Calculate the **greatest** value of h.
Give your answer correct to four decimal places.
You must show all your working. [3]

Examiner only

1. (a) Steffan always leaves his fridge-freezer turned on.
His fridge-freezer uses electricity costing £2.31 per week.
Electricity costs £0.30 per kWh.
Calculate the number of kWh of electricity Steffan's fridge-freezer uses **per day**.
You must show all your working. [3]

.....

.....

.....

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.....

.....

Examiner only

(b) Steffan is thinking of buying the fridge-freezer shown below.

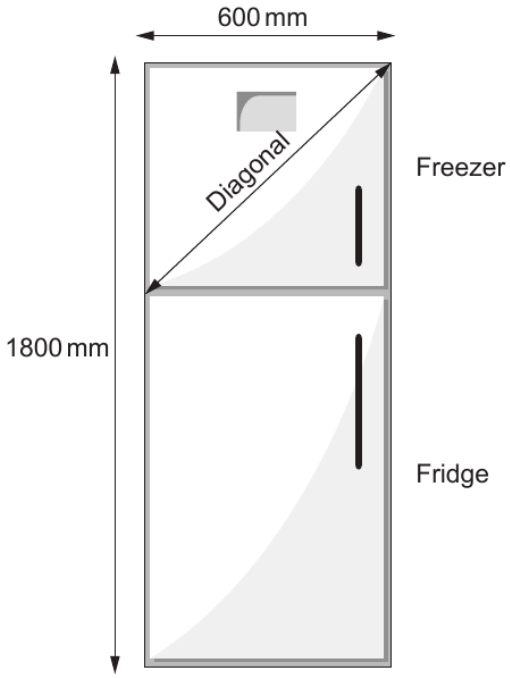

Diagram not drawn to scale

Steffan needs to check that the **freezer** compartment of this fridge-freezer has enough room.

The height of the freezer door is $\frac{2}{5}$ of the total height of the fridge-freezer.

Calculate the length of the **diagonal** of the freezer door.
Give your answer in millimetres.
You must show all your working. [5]

Examiner only

3. (a) The base of a flagpole is fixed to horizontal ground.
It is held vertically by a straight rod of length 3·8 m.
The rod is fixed to the ground and to a point 1·5 m from the top of the flagpole.
The flagpole and the rod are shown in the diagram below.

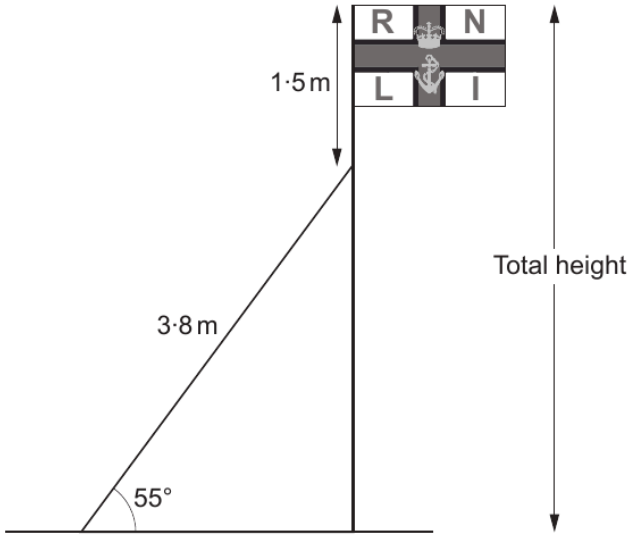

Diagram not drawn to scale

Calculate the **total** height of the flagpole.
Give your answer correct to the nearest centimetre. [4]

Examiner only

(b) Mathematically similar large, medium and small flags are made.

Diagrams not drawn to scale

(i) Calculate the length of the medium flag. [2]

.....

.....

.....

.....

Length of the medium flag is ..... cm

(ii) Calculate the height of the small flag. [2]

.....

.....

.....

.....

Height of the small flag is ..... cm

Examiner only

6. Teifion is going to paint the front of his bungalow.
He will not be painting the roof, door or window.
A diagram of the front of Teifion's bungalow is shown below.

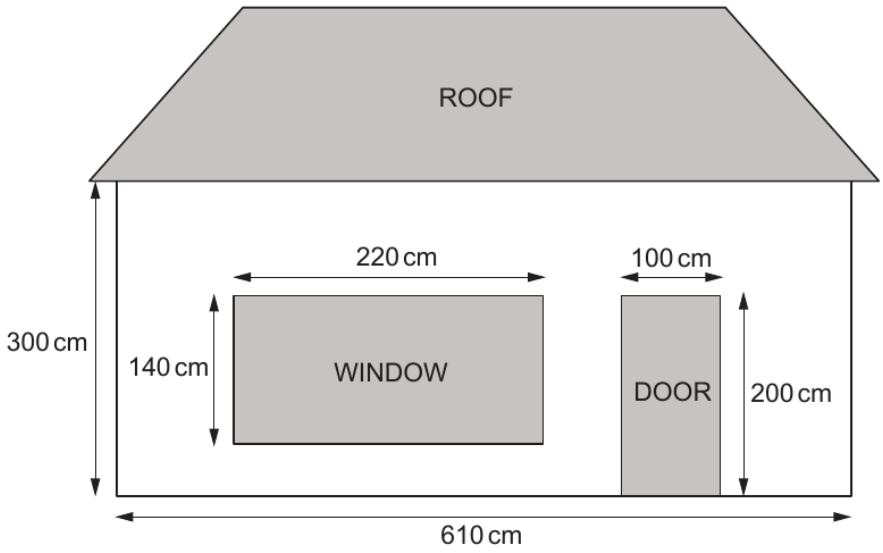

Diagram not drawn to scale

All the measurements on the diagram are **correct to the nearest 10 cm**.
A litre of paint will cover 50 000 cm^2, **correct to the nearest 10 000 cm^2**.

For a good finish, Teifion needs to paint the front of the bungalow **3 times**.
Calculate the **smallest possible** number of litres of paint that Teifion could use to paint the front of his bungalow 3 times. [7]

Examiner only

Smallest possible number of litres of paint that Teifion could use to paint the front of his bungalow 3 times is ..... litres

Examiner only

11. A solid has a height of 11 cm.
A **similar** solid has a height of 23 cm.
The volume of the smaller solid is 107 cm^3.
Calculate the volume of the larger solid. [3]

12. The solid shown below is a quarter of a sphere with radius 7·3 cm.

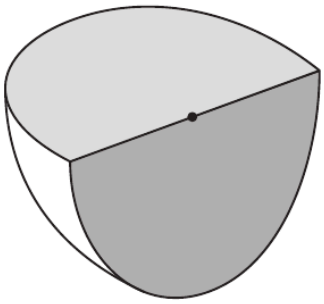

Diagram not drawn to scale

Calculate the volume of this solid.
Give your answer correct to 3 significant figures. [3]

$y = x^2 - 3x - 2$

x						
$y = x^2 - 3x - 2$						

$y = x^2 - 3x - 2$

$x^2 - 3x - 2 = 0$

$x^2 - 3x + 1 = 0$