



Revision Booklet

Functional Skills Level 1 November-December

QUESTIONS TO GO WITH YOUR
LESSONS

Name:

Vocational Course:

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Decimals

1) Michael wants to buy a new car.

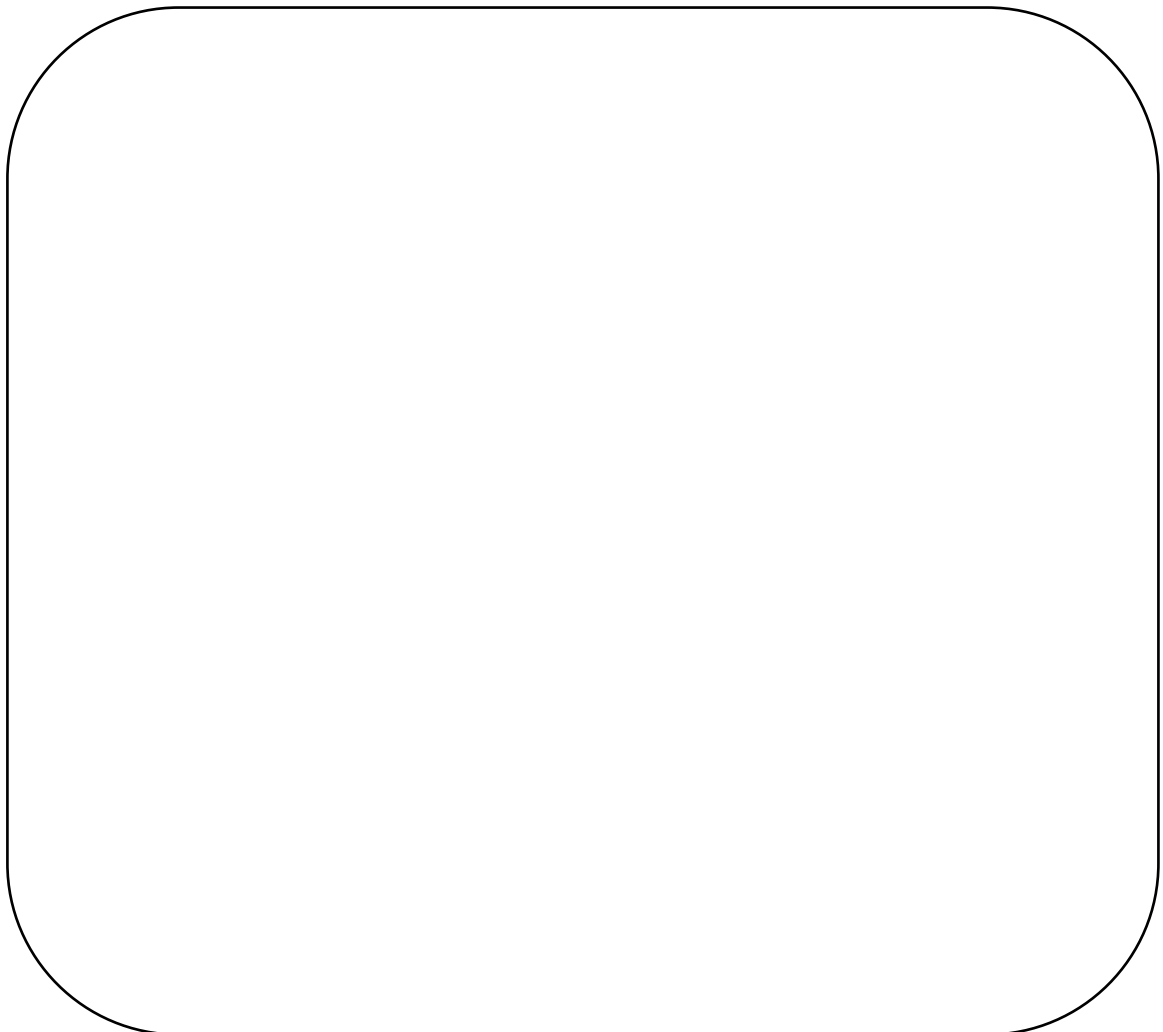
He needs to pay

- A cash deposit of £5875
- £229.20 each month for 24 months.

(a) Work out the total amount Michael will pay.

Show a check of your working

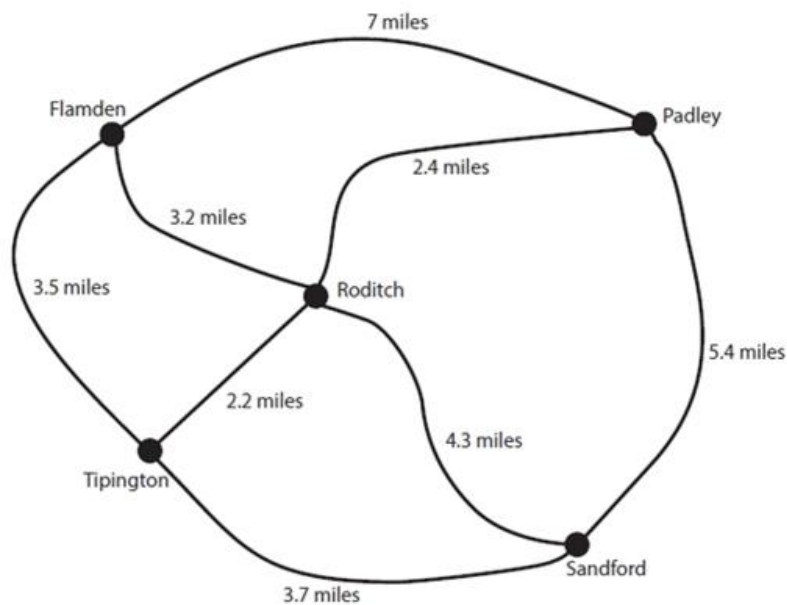
(4)



2) Gordon runs an ironing service.

Gordon collects and returns ironing from customers.

He uses this sketch to help plan his route.



Gordon needs to

- Drive in and out of Roditch to collect ironing from customers
- Collect ironing from the hotel in Padley
- Deliver ironing to a restaurant in Tipington
- Go to Flamden to buy supplies.

Gordon will start and finish at home in Roditch

He wants to find the shortest route.

Plan a route for Gordon.

Show the total distance of this route.

(4)

3) Lisa wants to make her home safer.

She finds a first aid kit for £17.74.

Lisa thinks it may be cheaper to make a kit up herself.

She finds these prices of items to go in a kit.

Kit Items	
Plastic box	£5.94
Plasters	£2.29
Bandages	£7.95
Gloves	80p
Wipes	55p

a) How much money will Lisa save if she makes the first aid kit?

Use the space below to show clearly how you get your answer.

(3)



4) Four apprentices want to raise £200 for charity.

Three of the apprentices raise these amounts.

Name	Amount raised
Harry	£40.60
Leanne	£81.70
Sanjay	£32.50

Sean is going to run around the playing field.

He is going to get £5.70 for each lap.

Sean thinks he needs to run 8 laps to raise the rest of the money.

Is Sean correct?

Show why you think this. You must show a check of your working.

Use the space below to show clearly how you get your answer.

(5)



5) Reece goes to see a film at the cinema.

He wants to buy a large drink and a large popcorn.

Reece sees this price list and a special offer.

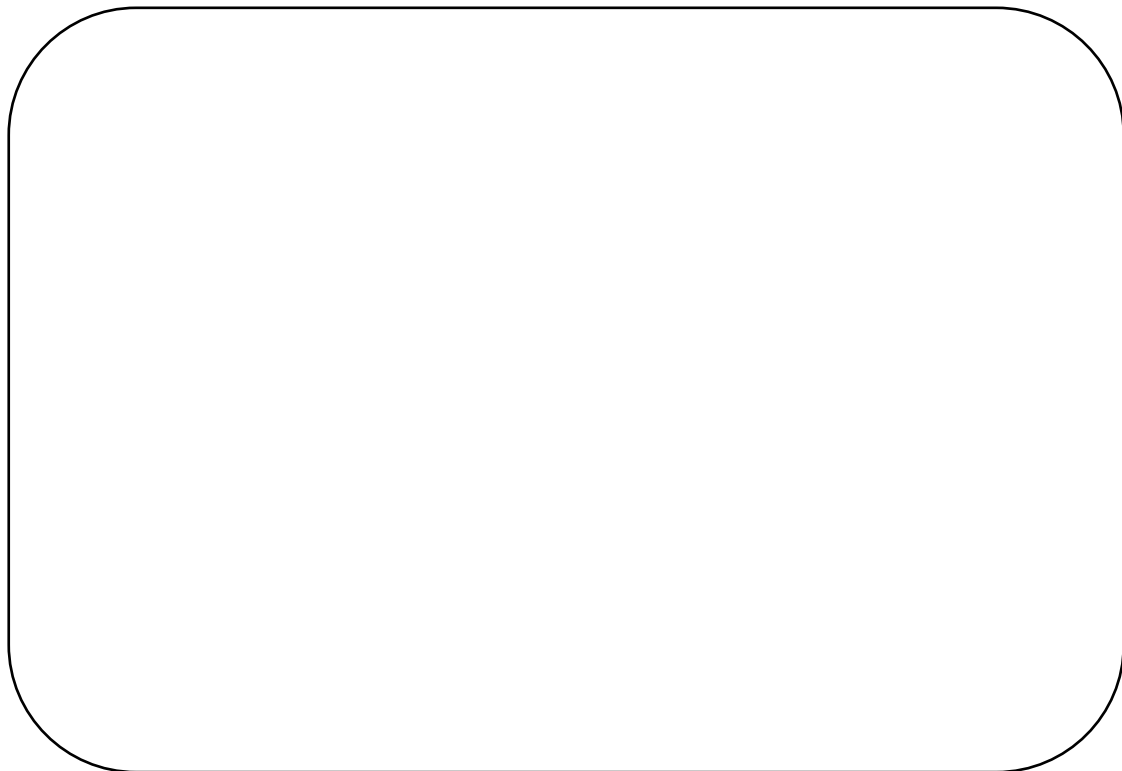
Price list			
	small	medium	large
drink	£1.99	£2.99	£3.99
popcorn	£2.49	£3.49	£4.49

Special offer!
Get a large drink and a large popcorn for £7.50

(a) How much will Reece save using the special offer to buy his large drink and large popcorn?

Show a check of your working.

Use the space below to show clearly how you get your answer.



6) Liz wants to feed the birds in her garden.
She wants to buy 2 bird feeders and 3 bags of bird seed.

Each bird feeder costs £6.95

A bag of bird seed costs £3.10

(a) Work out the total cost for Liz.

Use the space below to show clearly how you get your answer.

A large, empty rounded rectangular box with a thin black border, intended for the student to show their calculations for the total cost.

7) Liz and her family want to join a bird club for a year.

Liz and her husband are adults.

Andy is their only child.

They want to choose the cheapest membership deal for their family.

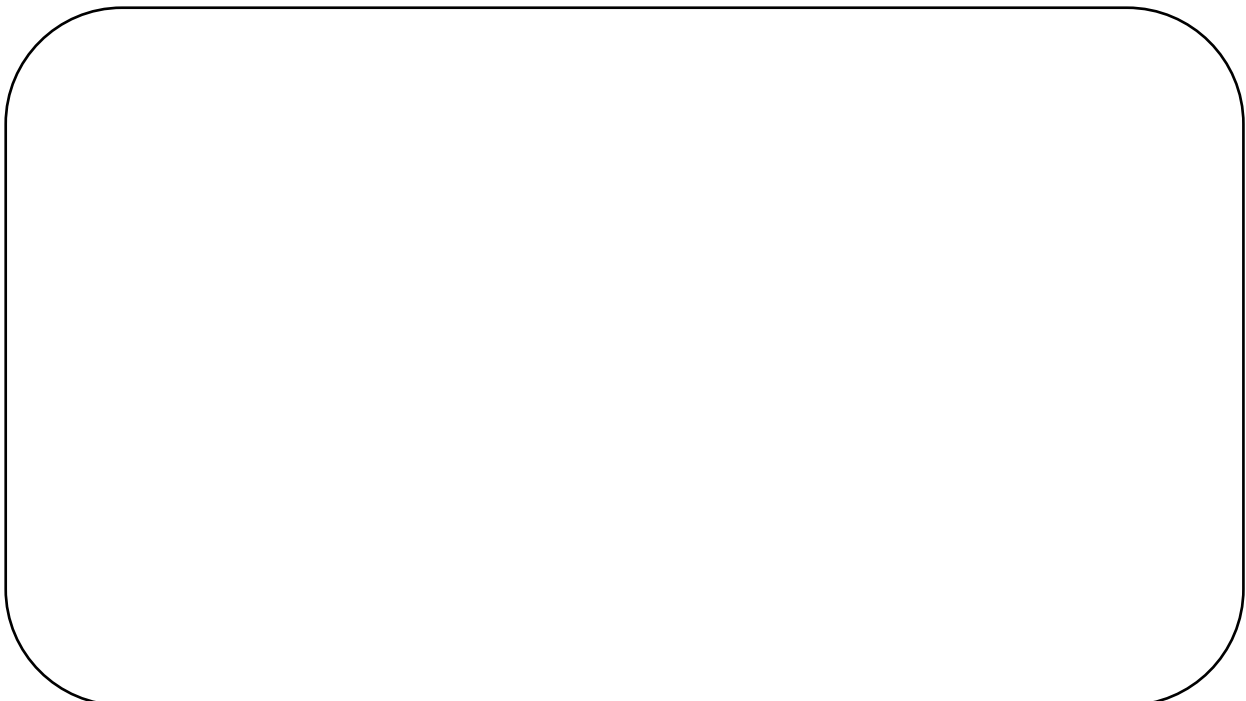
Bird Club Membership	
Adult	£4 per month
Child	£3 per month

Bird Club Family Membership
1 or 2 adults + up to 3 children
£126 per year

Which membership should they choose?

Show a check for your working.

Use the space below to show clearly how you get your answer. (4)



Formulae and Function Machines

1) Magda works at a charity for homeless people.

She needs to make lunch for 15 people.

Magda knows this rule to find the amount of rice she needs to cook.



Magda thinks she needs to cook 10 cups of rice for 15 people.

Is Magda correct?

Show why you think this.

(4)

A large, empty rounded rectangular box with a black border, intended for the student to write their answer to the question.

Formulae & Function Machines

2) Donna and her friend Martin are training for a sponsored run.
The sponsored run is 26 miles.
They find this rule to calculate how many calories are used to run 1 mile.



Donna weighs 136 pounds.
Martin weighs 152 pounds.
Martin thinks he will use 300 more calories on the sponsored run than Donna.

Is Martin correct?

Show why you think this.

(3)

Formulae & Function Machines

3) Michael plays football.

Michael wants to know how fit he is.

He measures his heart rate in beats per minute (bpm).

Michael uses this formula to work out his fitness value.

$$F = \frac{m \times 15}{r}$$

F = fitness value

m = maximum heart rate

r = resting heart rate

Michael has a

- Maximum heart rate of 192 bpm
- Resting heart rate of 50 bpm

A footballer should have a fitness value greater than 54.

Does Michael have a fitness value greater than 54?

(3)



Formulae & Function Machines

4) Tim wants to hang curtains along all 4 walls of his shed.

He uses this formula to work out the amount of material he needs to buy.



The length of the shed is 7.25m and the width is 3.75m.

Tim thinks he needs to buy 44m of material.

Does Tim need to buy 44m of material?

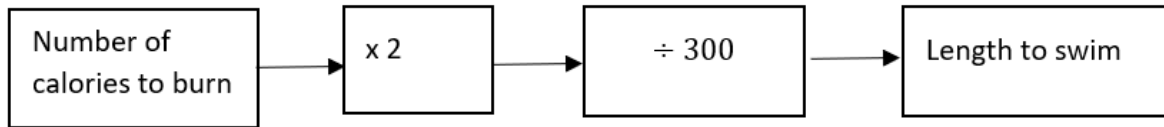
Show your workings.

(3)

A large, empty rounded rectangular box with a thin black border, intended for the student to show their calculations and reasoning for the problem.

5) Jenny goes swimming at the fitness centre to burn calories.

She uses this formula to work out how many lengths of the pool she needs to swim.



Jenny wants to burn 350 calories.

Jenny thinks she needs to swim 65 lengths to burn 350 calories.

Is she correct?

Show your workings.

(3)

A large, empty rounded rectangular box with a black border, intended for the student to show their calculations and reasoning.

6) Don is organising a comedy night for charity.

He is going to sell food at the comedy night.

Here is the price list.

Price List	
Slice of pizza	£2.75
Hot dog	£1.25
Hamburger	£1.95
Sandwich	£2.25
Chips	£1
Cake	£1.45

Don uses these instructions to work out how much money he can expect to make by selling food at the comedy night.

Work out the mean average price of all the items in the price list.

Multiply this mean average price by 80.

Don thinks he can expect to make at least £140.

Can Don expect to make at least £140 by selling food at the comedy night?

Show your workings.

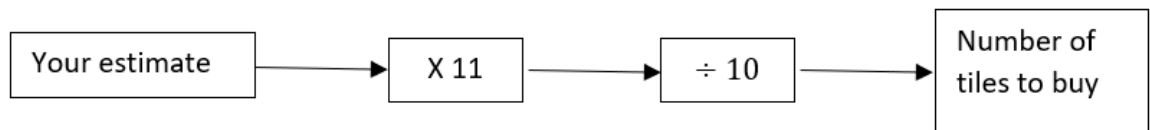
(3)

7) Anna wants to buy tiles for her bathroom floor.
She estimates that she needs 32 tiles.

The shop assistant says,

‘Buy more tiles in case you need extra to cut.’

He gives her this rule:



Anna thinks the rule shows she needs to buy 40 tiles.

Is Anna correct?

Show why you think this.

(2)

Conversion

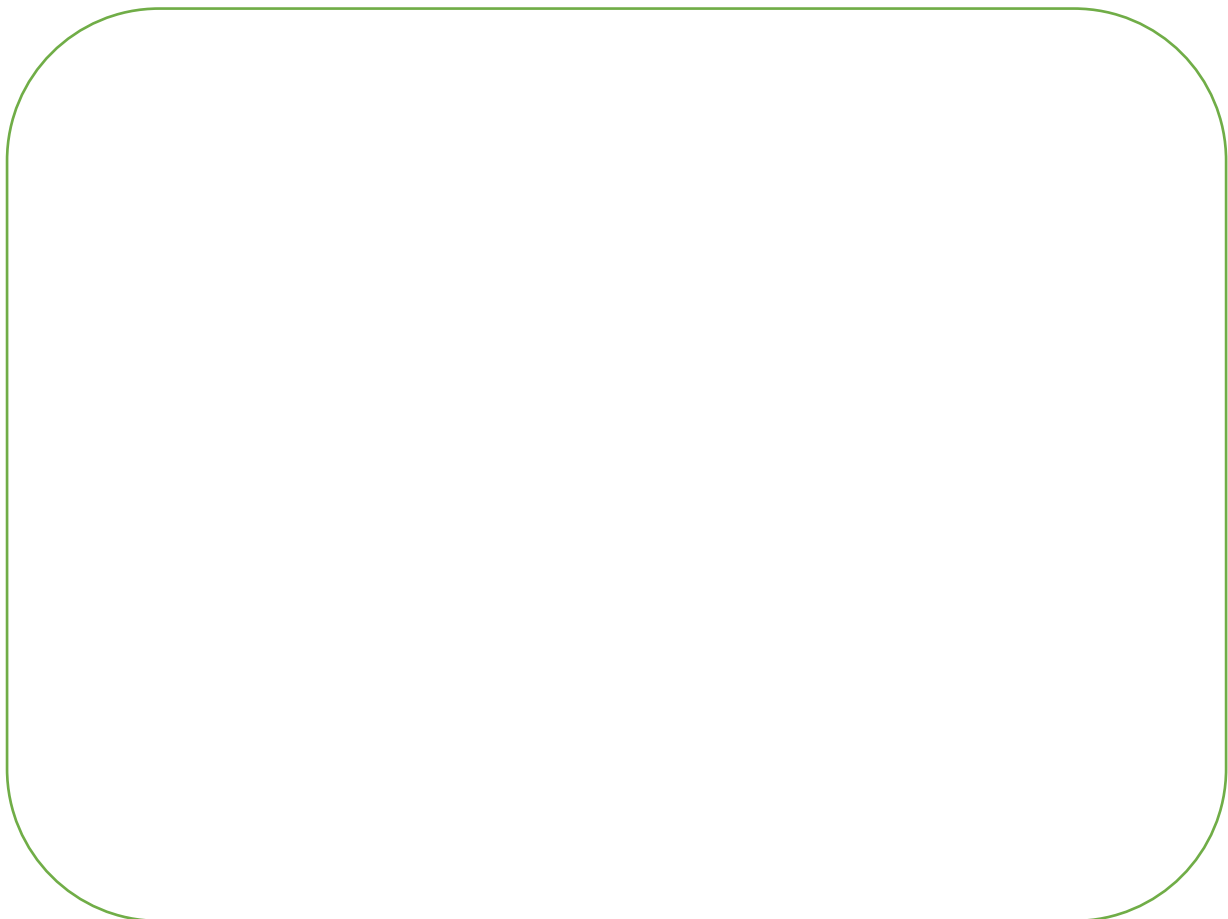
1) Leanne needs bottles of water for the people at the training day.

Each bottle contains 2 litres of water. There will be 13 people. Every person will have 3 glasses of water. Each full glass holds 250ml of water.

Leanne thinks she will need 5 bottles of water.

Are 5 bottles of water enough for 13 people?

Use the box below to show clearly how you get your answer.



(5)

Conversion

- 2) Clive plans to walk with a friend along the Cliffs of Moher.
Clive wants to carry a total of at least 3 litres of liquid to drink on the walk.

He has

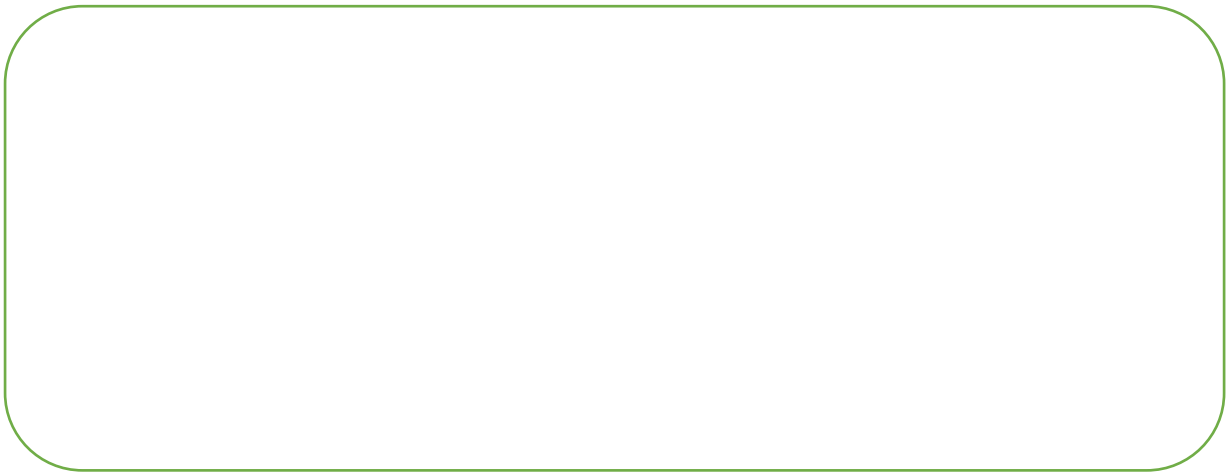
2 large bottles of water (750ml each)

2 small bottles of water (500ml each)

2 cans of soft drink (330ml each)

- a) Does Clive have at least 3 litres of liquid?

Use the box below to show clearly how you get your answer.



(4)

- 3) Jean is the manager of a bakery.

Conversion

She finds this list of ingredients for fruit bread.

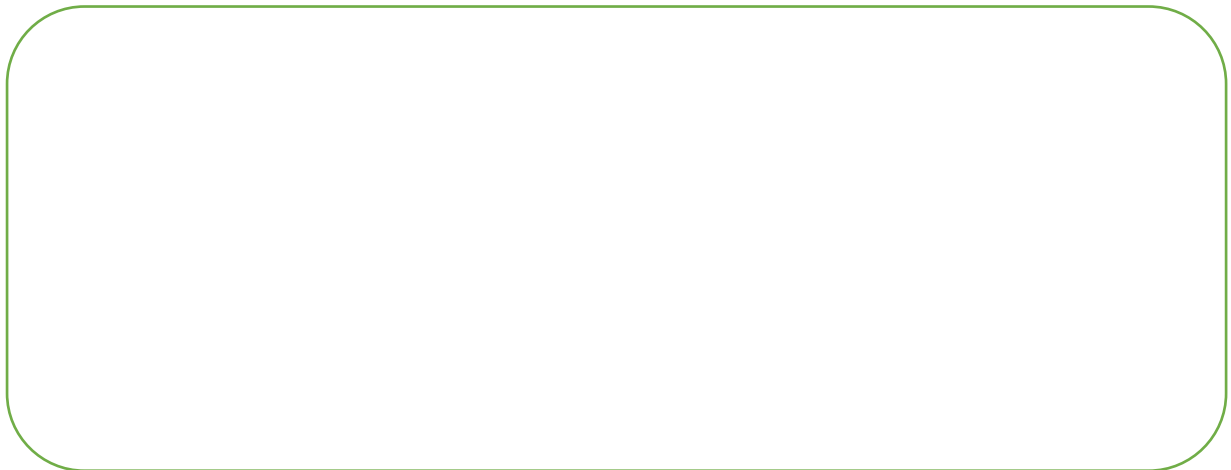
500g flour
14g yeast
50g sugar
50g butter
250g dried fruit
150ml milk

Jean has a 15kg bag of flour.

She wants to use all this flour.

What weight of sugar must Jean use with this flour?

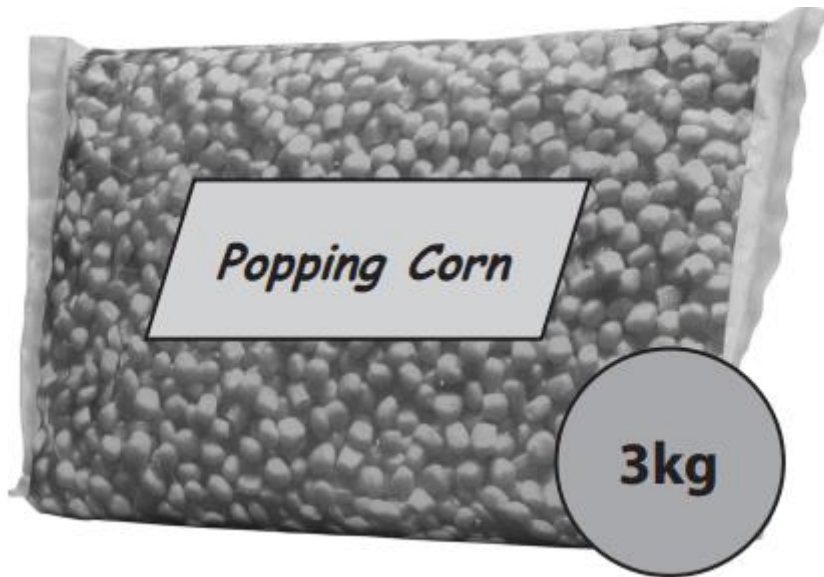
Show a check of your answer.



(4)

4) Tim buys this bag of popcorn.

Conversion



Tim knows he can make 1 serving of popcorn from 50g of popping corn.

He thinks he can make 75 servings of popcorn from the 3kg bag.

Is Tim correct?

Show why you think this.

Use the box below to clearly show how you get your answer.

(3)

Conversion

5) Paulo is a chef at the hotel.

He wants to make scones for afternoon tea.

Paulo is going to use these ingredients.

<p style="text-align: center;">Scone recipe</p> <p style="text-align: center;">Makes 8 scones</p> <p>80g butter</p> <p>80g sugar</p> <p>500g flour</p> <p>2 eggs</p> <p>250ml milk</p>
--

Paulo wants to make 80 scones.

He has 3 litres of milk.

- a) Does Paulo have enough milk to make 80 scones?
Show why you think this

Use the box below to show clearly how you get your answer.

(4)

Conversion

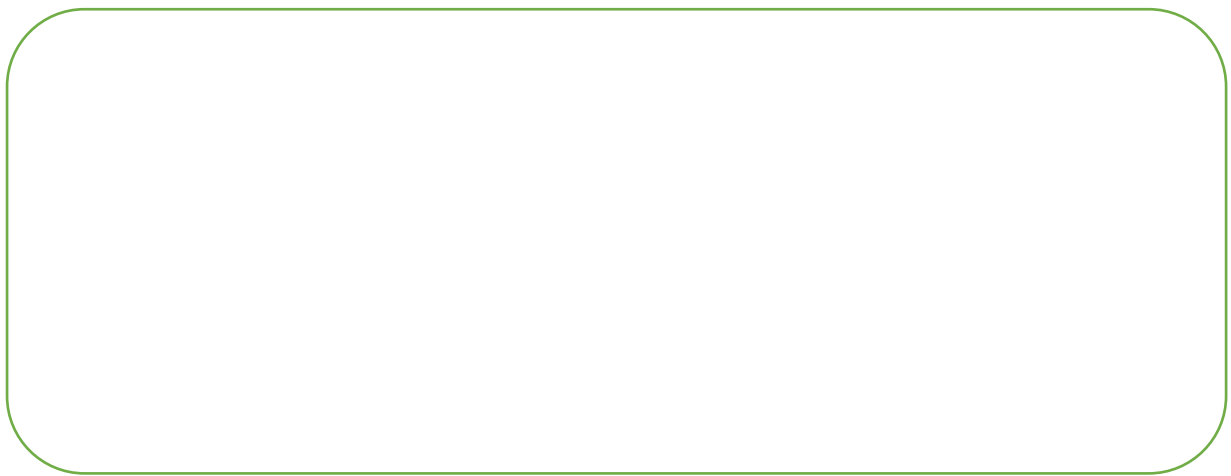
6) Tom leaves a bag of food for the dog.

He knows the dog eats 350g of food each day.

The bag contains 5kg of dog food.

Is 5kg of dog food enough for 14 days?

Use the box below to clearly show how you get your answer.



(3)

Conversion

7) Norman sells the same type of potatoes in bags of different weights.

Potatoes
500g
48p

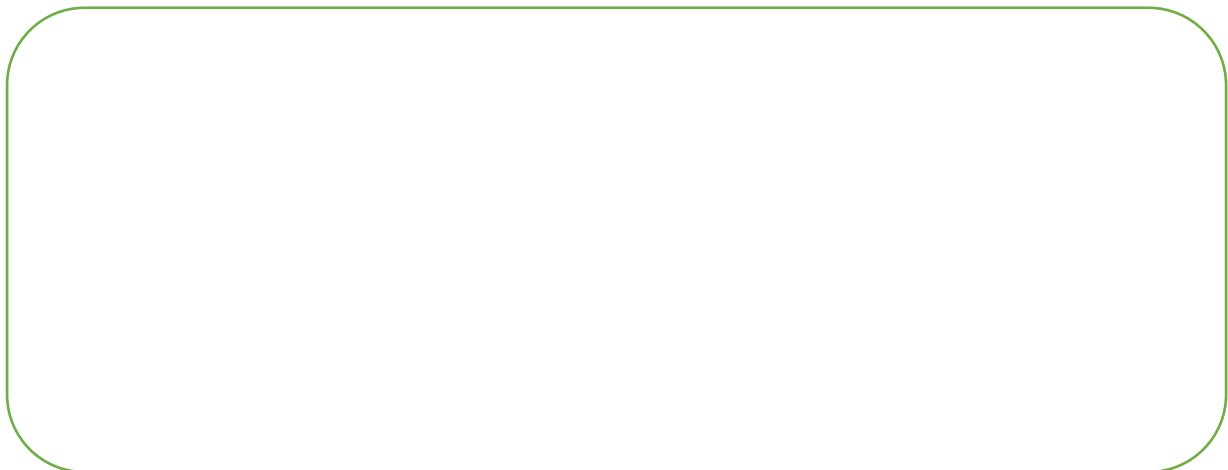
Potatoes
2kg
£1.65

Norman says the 500g bags of potatoes give the best value for money.

Is Norman correct?

Show why you think this.

Show a check of your working.



(3)

Percentages

- 1) Six students complete an assessment. To pass the assessment the students need to get at least 75% of the total marks. The total mark is 128. John scored 98 marks.

Has John passed the assessment?

(2)

- 2) Jane wants to buy a barbecue. She sees this offer:



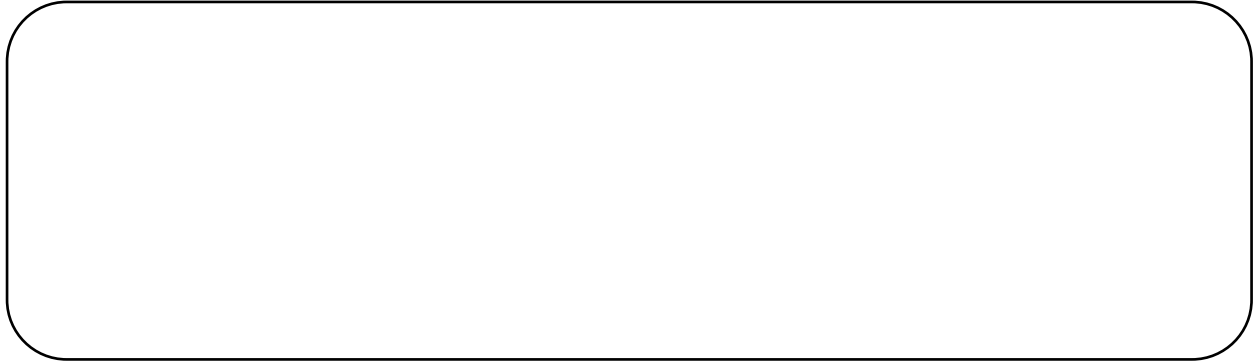
Work out 20% of £150 for Jane.

(2)

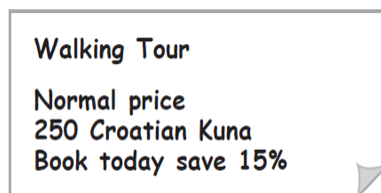
Percentages

- 3) There are 6000 bees in the beehive. 15% of the bees in the beehive are male bees. Alia thinks there are 900 male bees in the beehive. Is Alia correct?

(2)



- 4) In the hotel Winston and Karen see this offer



Work out 15% of 250.

(2)



Percentages

5) Caz is offered a new contract at work. He can choose how he wants to be paid.

Option A	Option B	Option C
Salary £37 200 per year	18% of the value of his sales each month	£1000 each month plus $\frac{1}{8}$ of the value of his sales each month

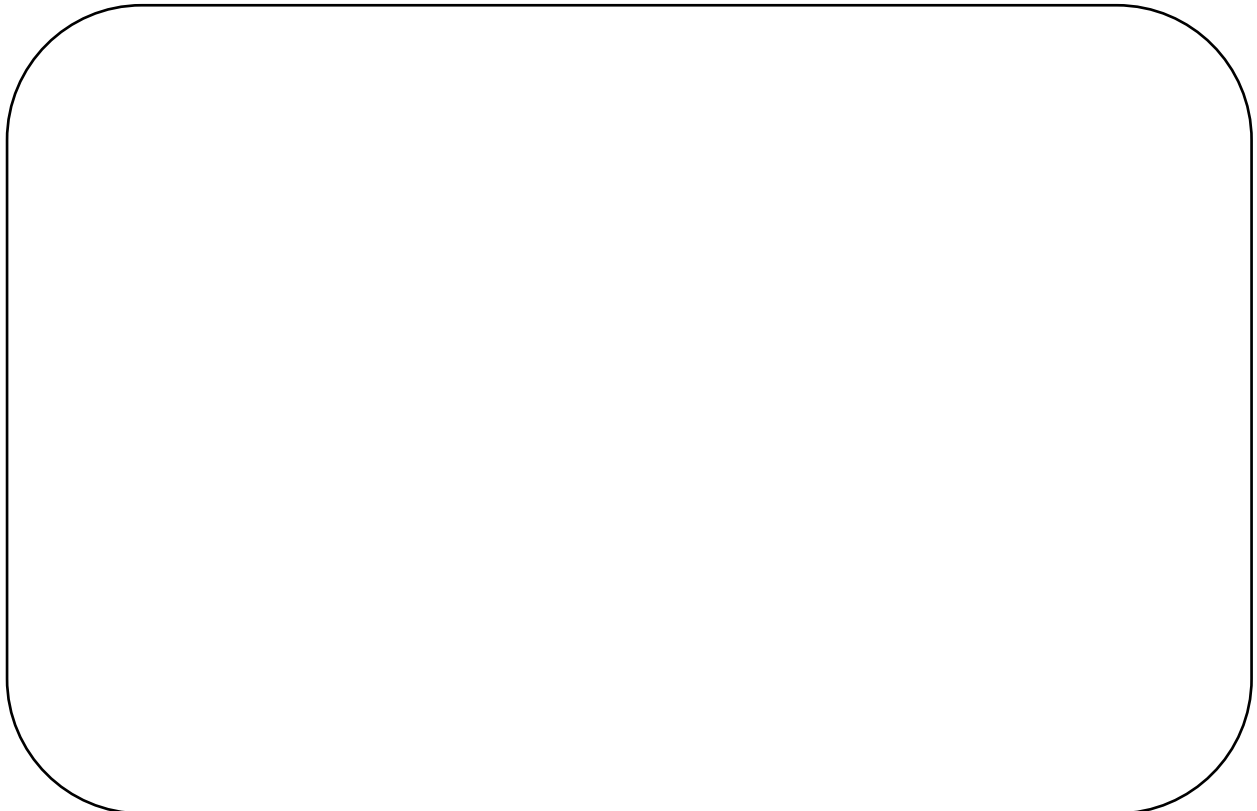
Caz expects to make sales of 21500 each month

He wants to be paid as much as possible.

Which option should Caz choose.

Show why you think this

(4)



Percentages

6) Freya is the production manager.

There are 125 staff making food at polar frozen foods.

Each of them works 35 hours a week.

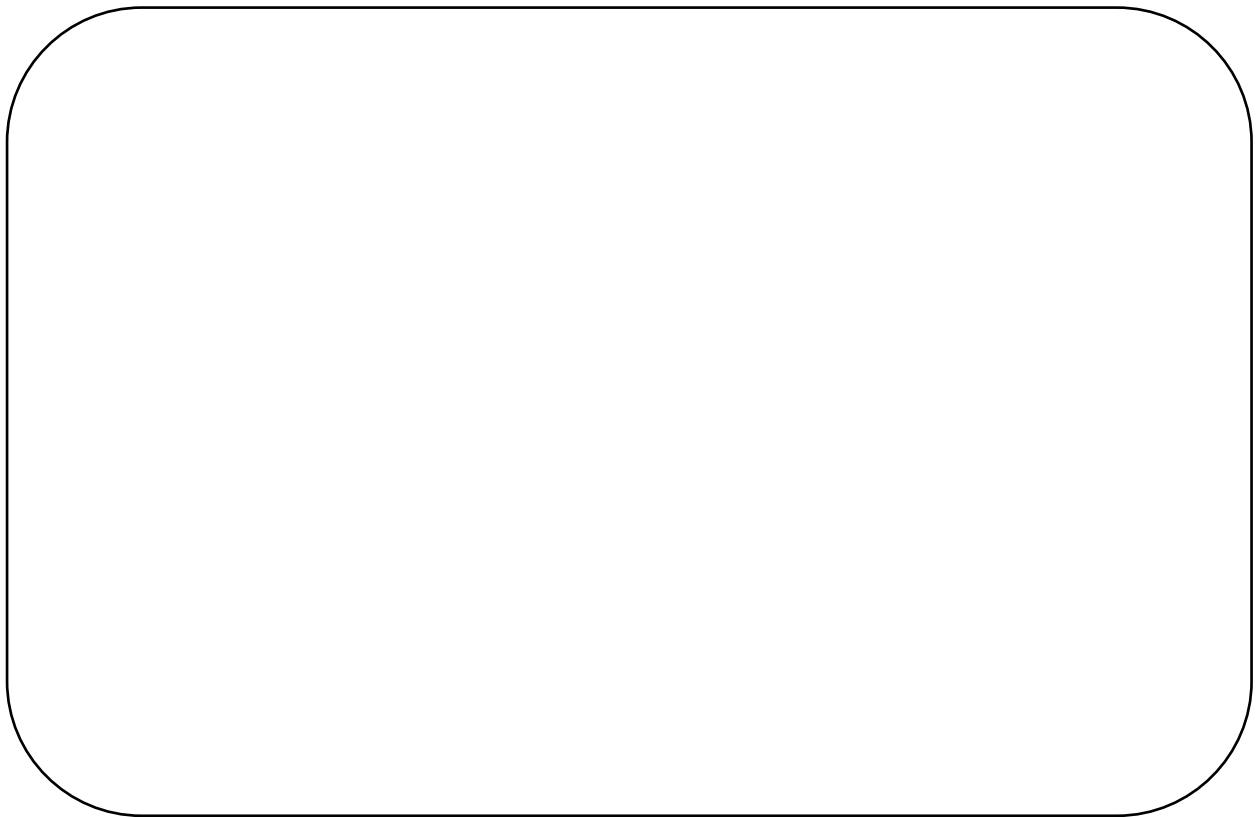
Freya is going to raise the hourly rate of these staff from £7.20 per hour to £8.25 per hour.

She also wants to increase the number of staff making food by 8%

They will be paid £8.25 per hour and will also work 35 hours a week.

Calculate the increase in the total amount of money the company will have to pay the staff making food each work.

(4)



Geometric Shapes

1) Anna needs to work out where to put the toilet and the basin in her bathroom.

The toilet must be in a corner of the room and not in front of a window.

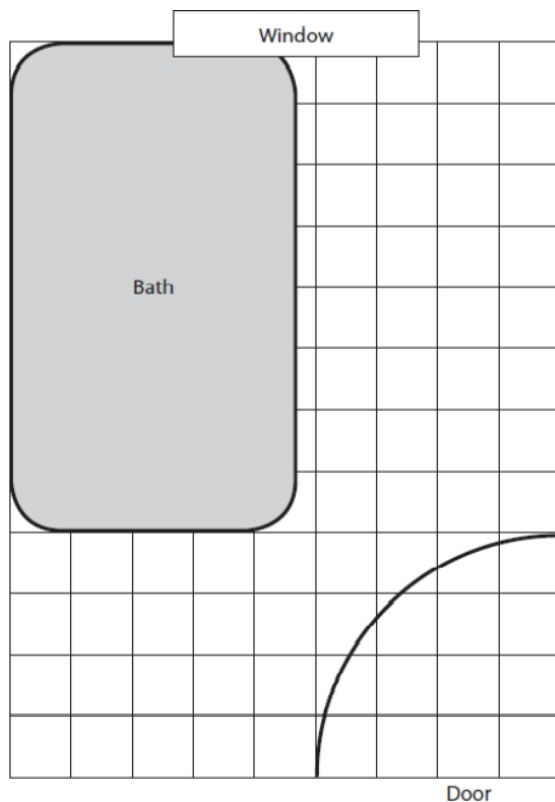
It needs a rectangular floor space 50 cm by 125 cm.

The basin must be against a wall. It needs a space 75 cm square.

Anna draws a plan of the bathroom on a grid.

Draw and label the space for the toilet and the space for the basin on the grid.

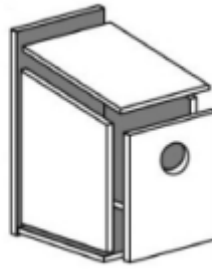
Remember to use the key.



Key: 1 square on the grid is 25cm by 25cm in the bathroom.

(4)

- 2) Jon wants to attract birds to his garden. He is going to make a small bird box. Jon uses this sketch to help him make a bird box.



Jon knows this information about the hole on the front of the bird box.

The centre of the hole must be

- a) 150 mm from the bottom
- b) equal distances from the left edge and the right edge.

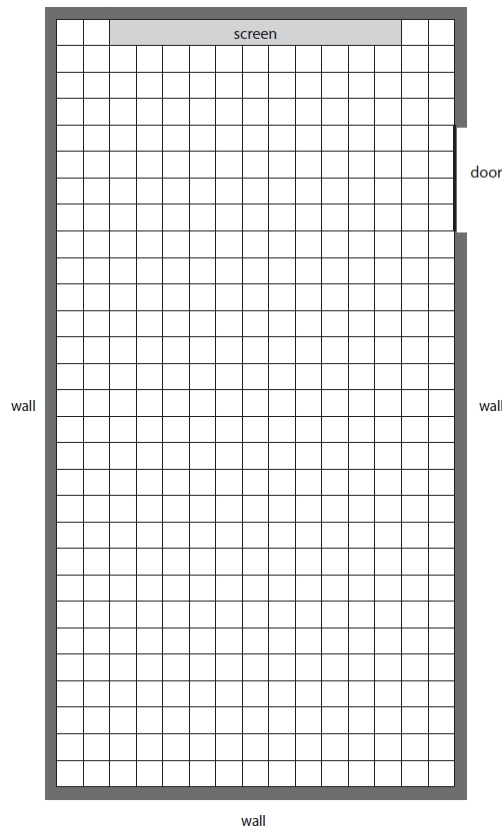
Jon wants to mark the centre of the hole on the front of the box to guide him. He has drawn an accurate diagram of the front of the box on the opposite page.

- (i) Mark, with a cross, the centre of the hole on the accurate diagram



(3)

- 3) Tim wants to put two sofas in the shed.
He draws a plan of the floor space on this grid.



Key: 1 square on the grid is 25 cm by 25 cm on the floor of the shed.

Each sofa needs a rectangular space 2 m by 1 m.

There must be a gap of at least

- 75 cm between any sofa and the walls
- 50 cm between sofas
- 3 m between the screen and the sofa nearest to the screen.

The longest side of each sofa must face the screen.

Draw the space for each sofa on the grid.

You may use the space below to show any working. (4)

Geometric Shapes

4) Matt is building a bird box from wood.
The side of the bird box is shown below.

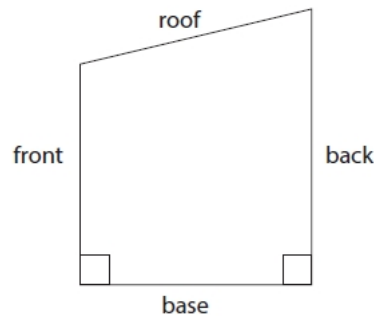


Diagram **not**
accurately drawn

The length of the base is 120 mm.
The height of the front is 150 mm.
The height of the back is 200 mm.

(a) Make an accurate drawing of the side of the bird box for Matt.

(3)

Use the space on the next page for your drawing.
The base has been drawn for you.

(b) Measure the length of the roof.

Give the units with your answer.

(1)

Write your answer in the space below.

5a) Ben wants to keep rabbits in his garden.

The rabbits will live in a rabbit run and hutch.

Ben wants to put the rabbit run and hutch on his lawn.

The space for the rabbit run must

- be square 350 cm by 350 cm
- have at least 50 cm space to walk around it.

The space for the rabbit hutch must be

- rectangular 200 cm by 50 cm.

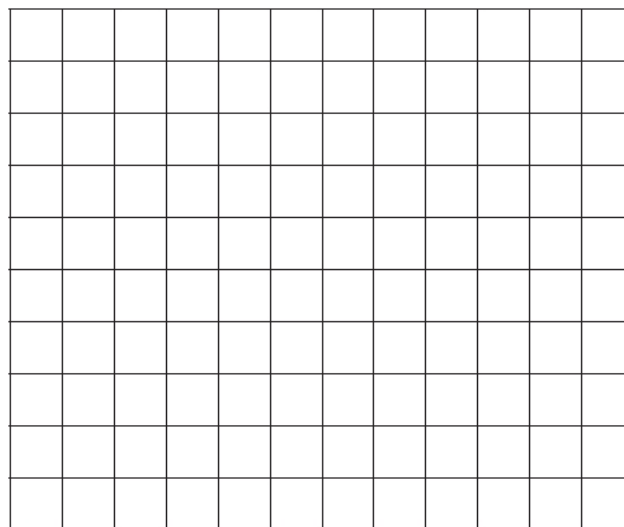
The rabbit hutch will be in a corner inside the rabbit run.

The grid below is a plan of the lawn.

(a) Draw a space for the rabbit run and the rabbit hutch on the grid.

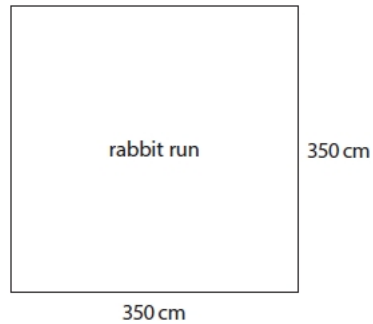
Remember to use the key.

(4)



Key: 1 square on the grid is 50 cm by 50 cm on the lawn

5b) Ben needs to put wire fencing around the rabbit run.



Wire fencing is sold in rolls of length 6 m.

The fencing can be joined.

Ben has 3 rolls of wire fencing.

(b) Are 3 rolls of wire fencing enough to go around the rabbit run?

(4)

Use the space below to show clearly how you get your answer.

A large, empty rounded rectangular box with a green border, intended for the student to show their work.

Geometric Shapes

6) Liz wants to work out where to put a bed and a wardrobe in her daughter's bedroom.

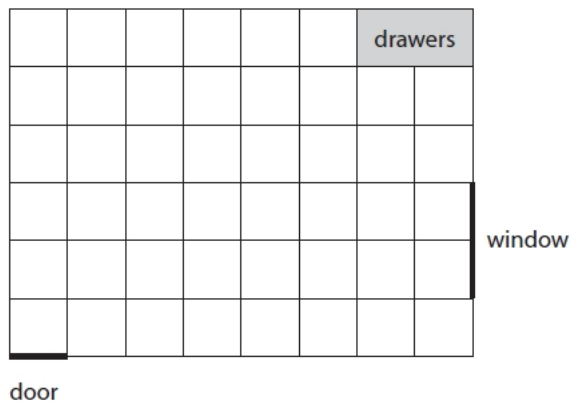
The bed needs a rectangular space 2 m by 1 m.
It must be in a corner of the room.

The wardrobe needs a rectangular space 2 m by $\frac{1}{2}$ m.

The longest side must be against a wall.

Liz draws a plan of the bedroom on a grid.

Draw a space for the bed and a space for the wardrobe on the grid.



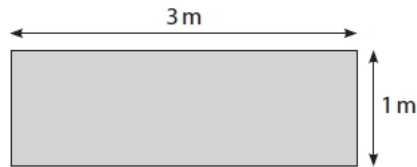
Key: 1 square on the grid is 50cm by 50cm in the room

(3)

7) Billy has two tables to seat the 12 people.

The top of each table is a rectangle 3 m by 1 m.

Each person sat at a table needs a space of length 1 m.



Billy wants to put the two tables together so that

- they touch along one edge
- all 12 people can sit at a table.

(b) Draw a diagram to show how Billy can put the two tables together.

(2)

Use the space below to draw your diagram.

A large, empty rounded rectangular area with a green border, intended for the student to draw a diagram showing how two tables can be put together to seat 12 people.

Mean & Range

1) A café is open 6 days a week.

The manager says he needs to serve a mean number of 65 people a day to make a profit.

The table shows the number of people served in the café each day for one week.

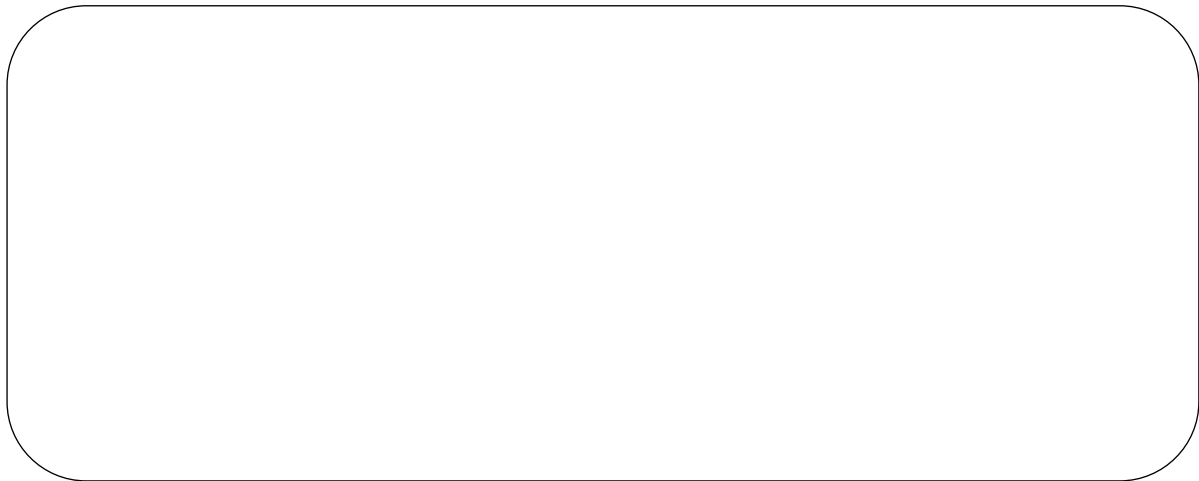
	Mon	Tue	Wed	Thur	Fri	Sat
Number of People	55	75	72	19	71	125

Jo says the mean number of people served a day is more than 65.

Is Jo correct?

Show why you think this.

Use the space below to show clearly how you got your answer. (3)



2) Zaid is the manager of an activity centre.

He needs to decide if the activity centre will run more gymnastics lessons.

Zaid has this information about the number of children who came to gymnastics lessons in the last 7 weeks.

Mean & Range

Number of children	115	127	138	140	122	135	133
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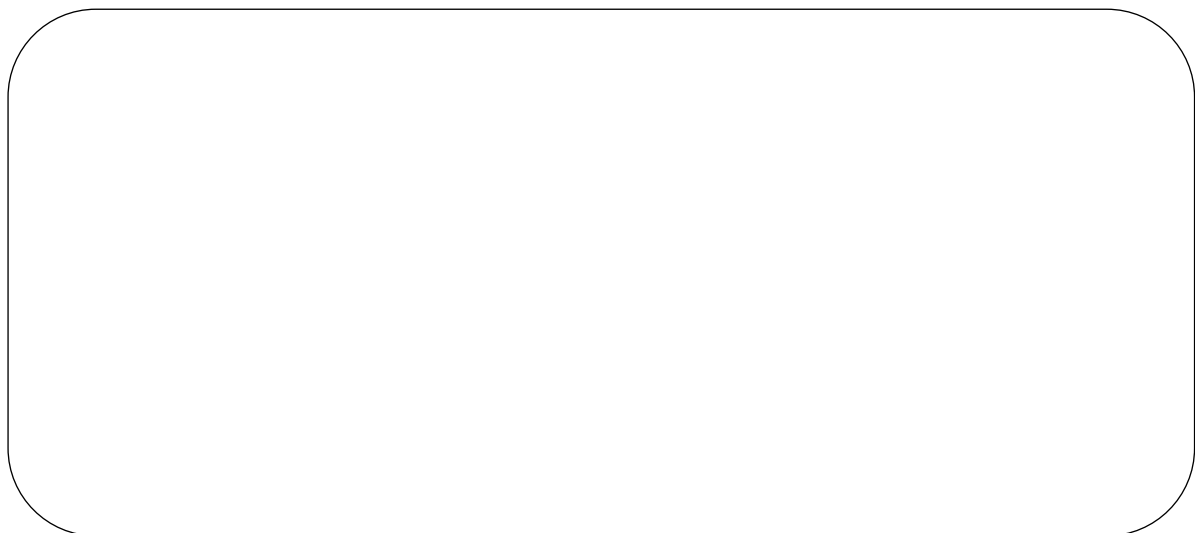
Zaid says...

The centre will run more gymnastics lessons if the mean average number of children each week for the last 7 weeks is more than 125

Will the activity centre run more gymnastics lessons?

Show why you think this.

Use the space below to show clearly how you got your answer. (3)



3) Luke is a member of a rowing club.

The rowing club organises a charity event using indoor rowing machines.

The table shows the time it took Luke to row 10 km in 6 training sessions.

Time taken (minutes)	54	52	47	51	45	42
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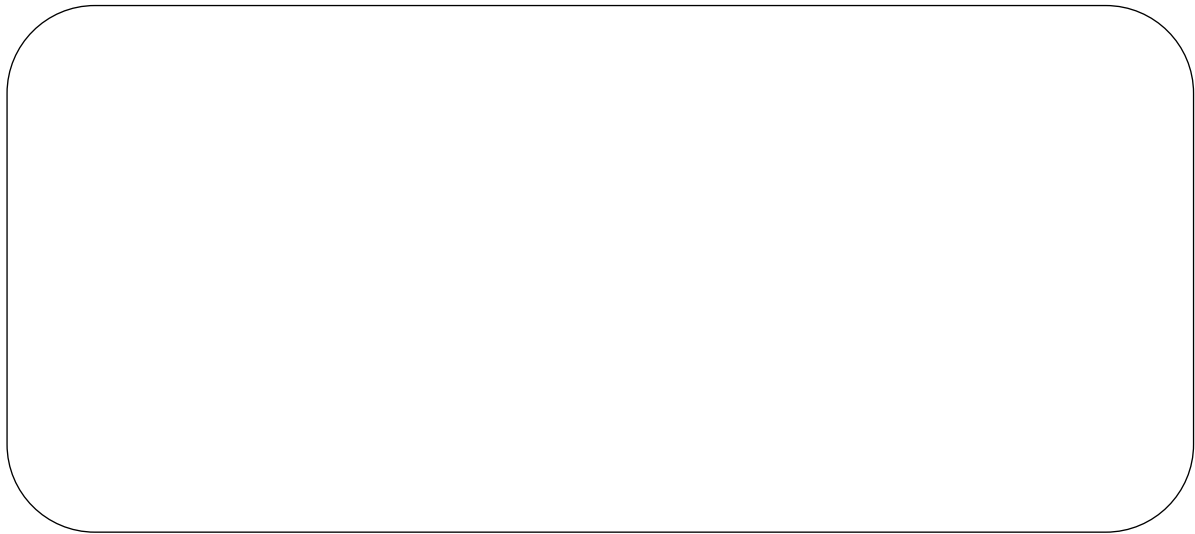
Luke can enter the rowing event if his mean time to row 10 km is less than 50 minutes.

Is his mean time to row 10km less than 50 minutes? (4)

Mean & Range

Show a check of your working.

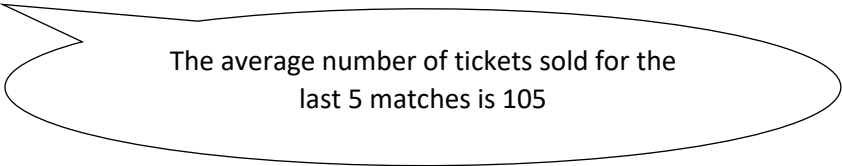
Use the space below to show clearly how you got your answer.



4) Brian has this information about the number of tickets sold for the last 5 matches.

Match	1	2	3	4	5
Tickets sold	115	93	158	127	82

Brian says...



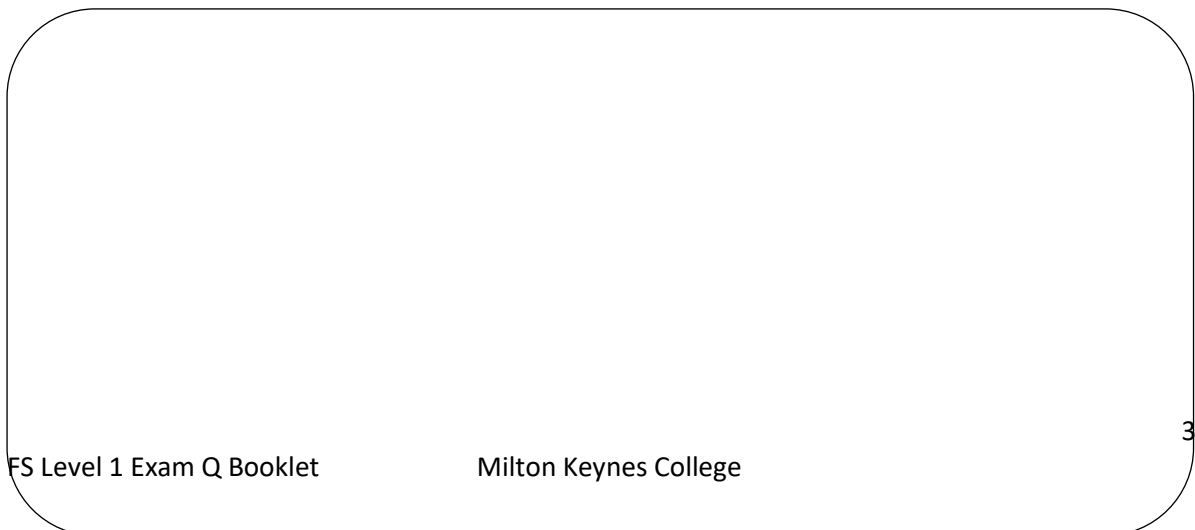
The average number of tickets sold for the last 5 matches is 105

Is Brian correct?

Show why you think this.

(3)

Use the space below to show clearly how you get your answer.



Mean & Range

5a) Alia fills 5 jars with honey from the beehive.

She wants to know the mean weight of the honey in the 5 jars.

Jar	1	2	3	4	5
Weight of honey (g)	440	460	465	455	450

Work out the mean weight of the honey in the 5 jars.

Show a check of your working.

Use the space below to show clearly how you got your answer.

(4)

5b) Alia also wants to know the range of the weight of honey in the 5 jars.

Jar	1	2	3	4	5
Weight of honey (g)	440	460	465	455	450

Work out the range of the weight of the honey in the 5 jars.

(2)

Use the space below to show clearly how you got your answer.

Mean & Range

6) Kyle has a cleaning business.

He is going to write a report about his business.

Kyle has this information about the number of customers in the last 5 years.

Year	1	2	3	4	5
Number of Customers	653	764	698	845	923

Kyle needs to know the yearly average number of customers? (4)

Show a check of your working.

Use the space below to show clearly how you got your answer.

7) Mick completes a total of 5 assessments for his course.

He gets these marks:

56 42 47 59 48

Mick needs an average mark of 50 or more to pass the course.

Does Mick pass the course?

Show a check of your working

Use the space below to show clearly how you got your answer (4)

Area

- 1) Ben wants to keep rabbits in his garden. The rabbits will live in a rabbit run and hutch. Ben wants to put the rabbit run and hutch on his lawn.

The space for the rabbit run must

- Be square 350cm by 350cm
- Have a least 50cm space to walk around it.

The space for the rabbit hutch must be

- Rectangular 200cm by 50cm.

The rabbit hutch will be in a corner inside the rabbit run.

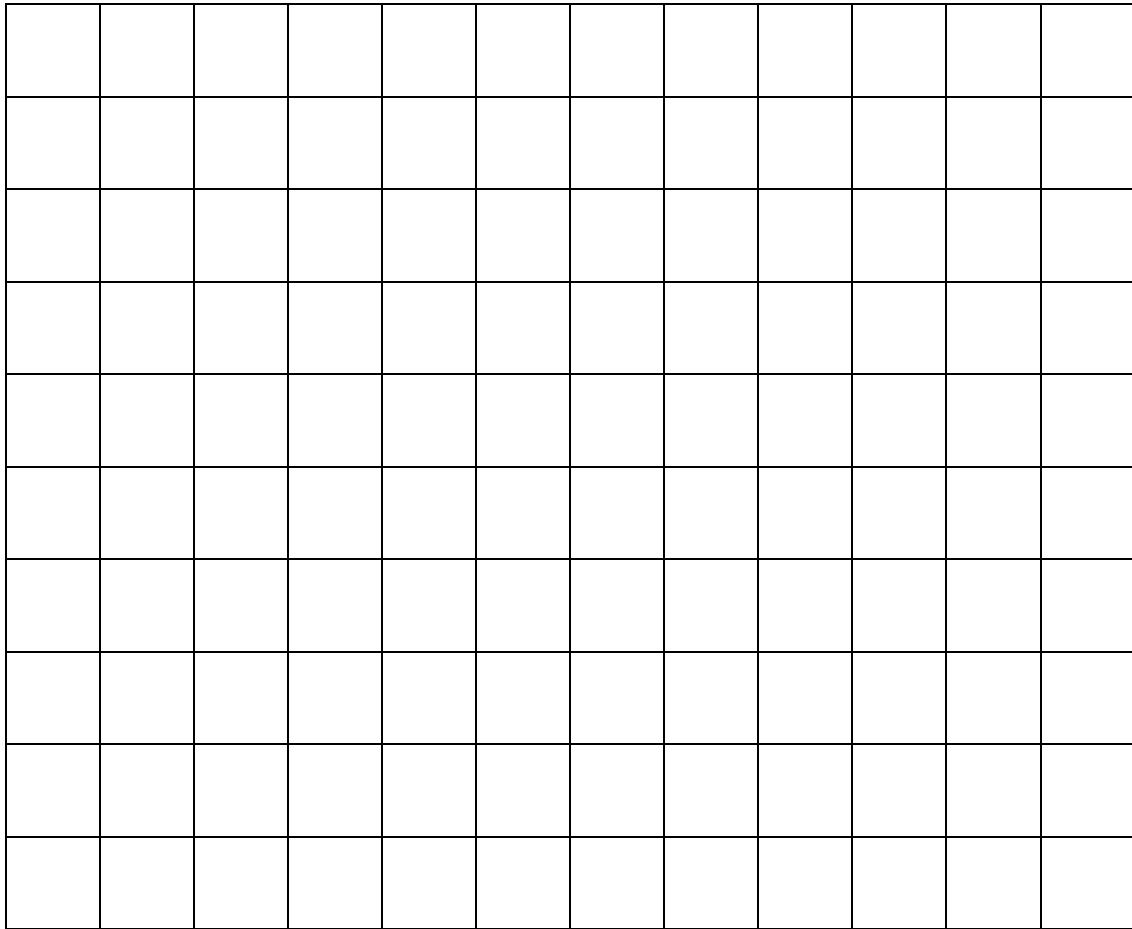
The grid below is a plan of the lawn.

- (a) Draw a space for the rabbit run and the rabbit hutch on the grid.

Remember to use the key.

(4)

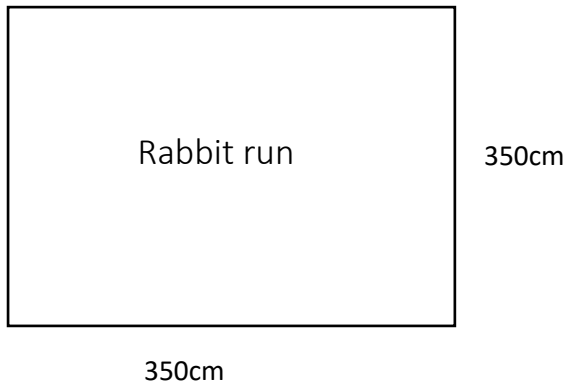
Area



Key: 1 square on the grid is 50cm by 50cm on the lawn

Area

Ben needs to put wire fencing around the rabbit run.



Wire fencing is sold in rolls of length 6m. The fencing can be joined. Ben has 3 rolls of wire fencing.

(b) Are 3 rolls of wire fencing enough to go around the rabbit run?

(4)

Use the space below to show clearly how you get your answer.

A large rounded rectangular box intended for the student to show their work.

Area

- 2) The beehive has wooden frames. Each frame is made from 4 pieces of wood.

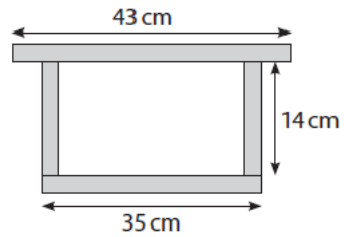


Diagram **not**
accurately drawn

All corners of the frame are right angles.

The diagram shows the lengths of the sides of the frame.

Alia wants to make 2 new frames.

She has a 2.4 metre length of wood.

Alia thinks this will be enough to make the 2 frames.

Is Alia correct?

Show why you think this.

(4)

Use the space below to show clearly how you get your answer

A large, empty rounded rectangular box with a thin gray border, intended for the student to show their work and calculations.

3) The opening hours for the beach office change during the year.

These are the opening times for the beach office.

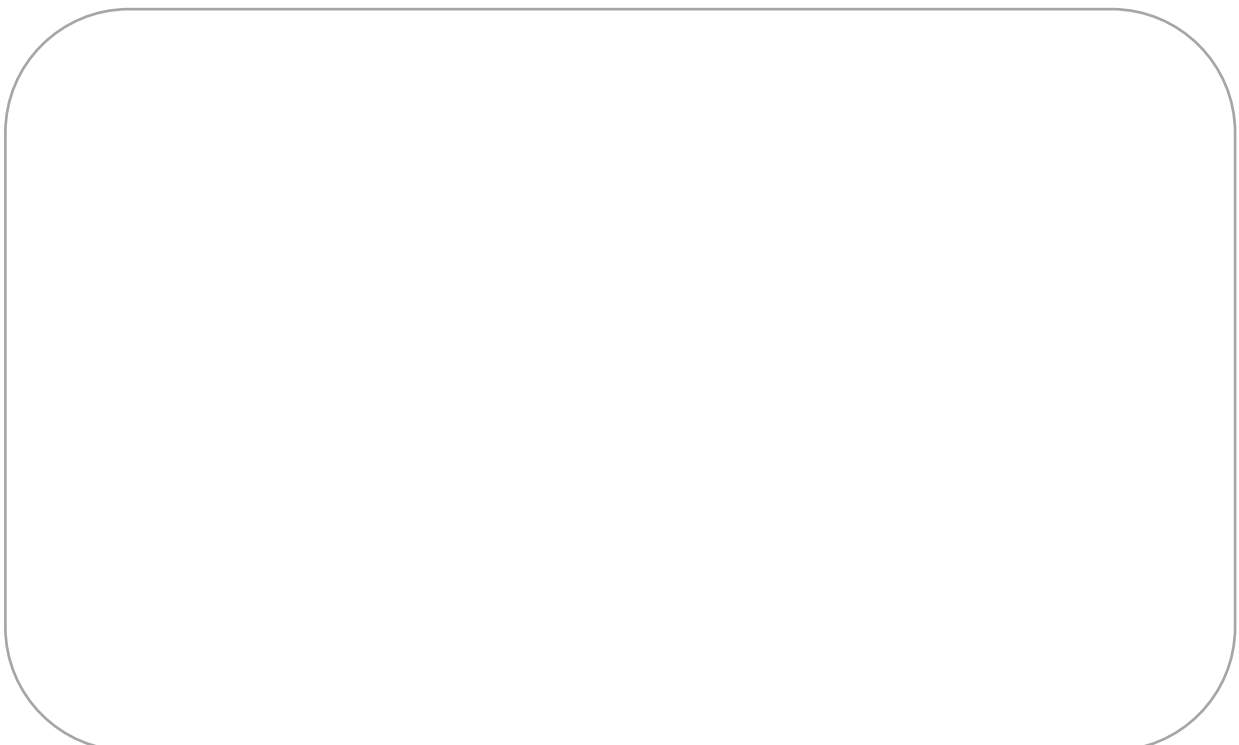
Peak season	
Monday to Sunday	9.30 am to 6.30 pm
Off-peak season	
Monday to Friday	9.30 am to 3.30 pm
Saturday and Sunday	closed

Marta wants to compare the number of hours the office is open each week for two seasons.

(a) For how many more hours is the office open each week in the peak season than in the off-peak season?

(4)

Use the space below to show clearly how you get your answer.

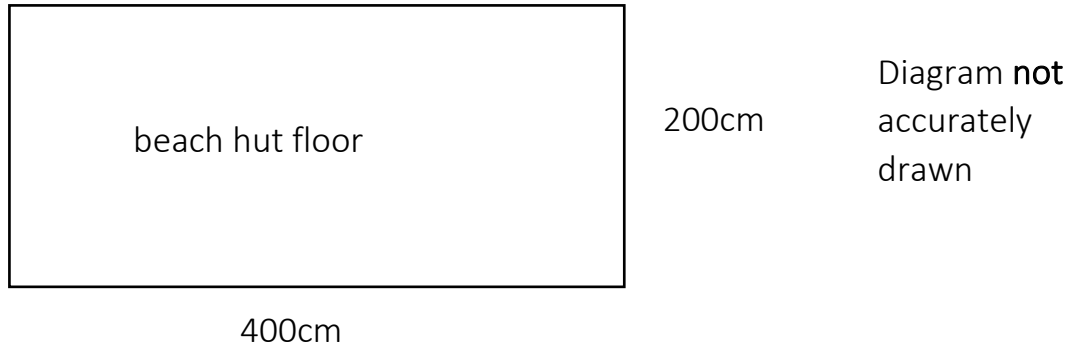


Area

Marta needs to cover the whole floor in 3 of the beach huts with tiles.

The floor in each beach hut is rectangular 400cm by 200cm.

Each tile is square 50cm by 50cm.



Each tile costs £8.99.

Marta has £850 to spend on the tiles.

(b) Is £850 enough to buy all the tiles Marta needs?

(6)

Use the space below to show clearly how you get your answer.

A large rounded rectangular box intended for the student to show their working out for the problem.

Area

4) Kay is organising an exhibition on health and beauty.

The exhibition will be open from 11 am to 4 pm.

There will be

3 different exhibition rooms with presentations

a lunch break for 45 minutes.

a coffee break for 30 minutes.

Lunch and coffee will be served in the restaurant.

Kay wants people to spend an equal amount of time in each exhibition

room. She thinks this means people will spend at least 1 hour 20 minutes

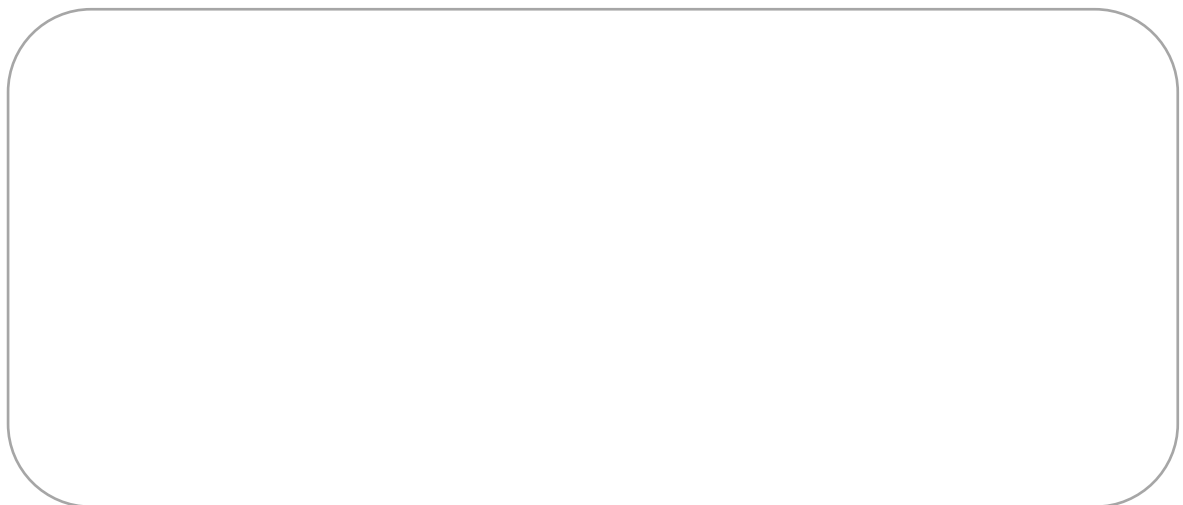
in each exhibition room.

(a) Is Kay correct?

Show why you think this.

(4)

Use the space below to show clearly how you get your answer.



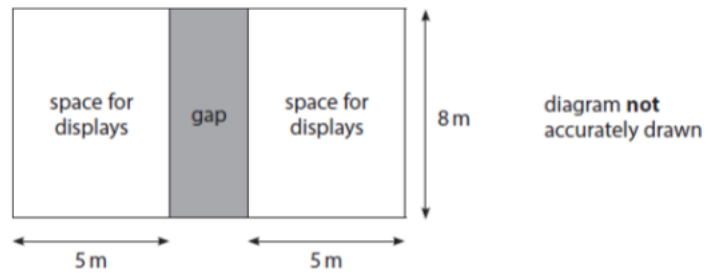
Area

Kay wants to plan the displays in a room.

Each display needs a space of 3 m^2 .

Kay has a sketch of the room.

All corners are right angles.



Kay thinks there is enough space for at least 25 displays.

(b) Is there enough space for at least 25 displays in the room?

(4)

Use the space below to show clearly how you get your answer.

Area

Jermaine will have a perfume display in one of the rooms.

He has a 2 litres of perfume to give away to visitors.

Jermaine has 120 empty bottles.

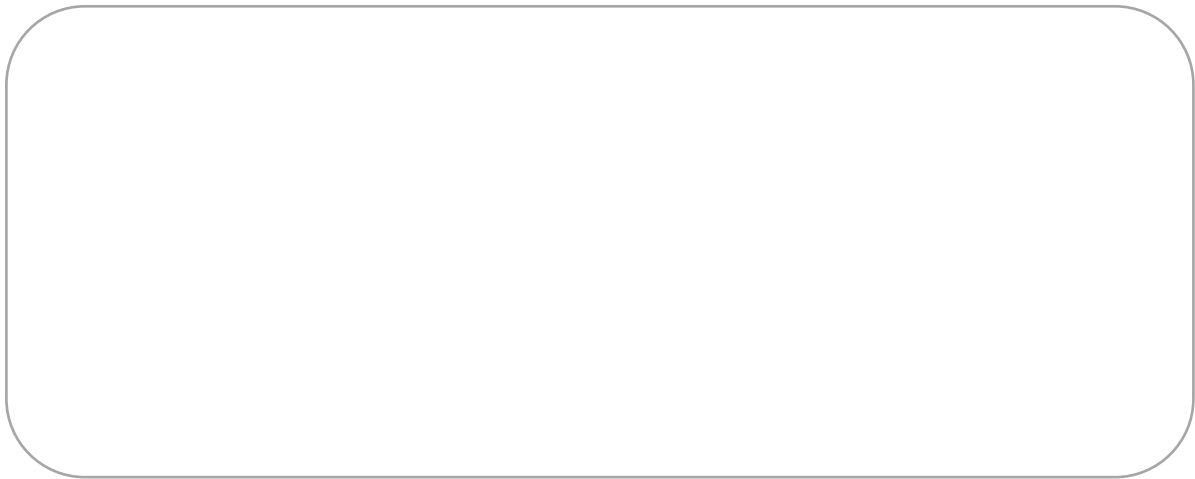
Each bottle can hold 15ml of perfume when full.

c) Does Jermaine have enough perfume to fill up all the bottles?

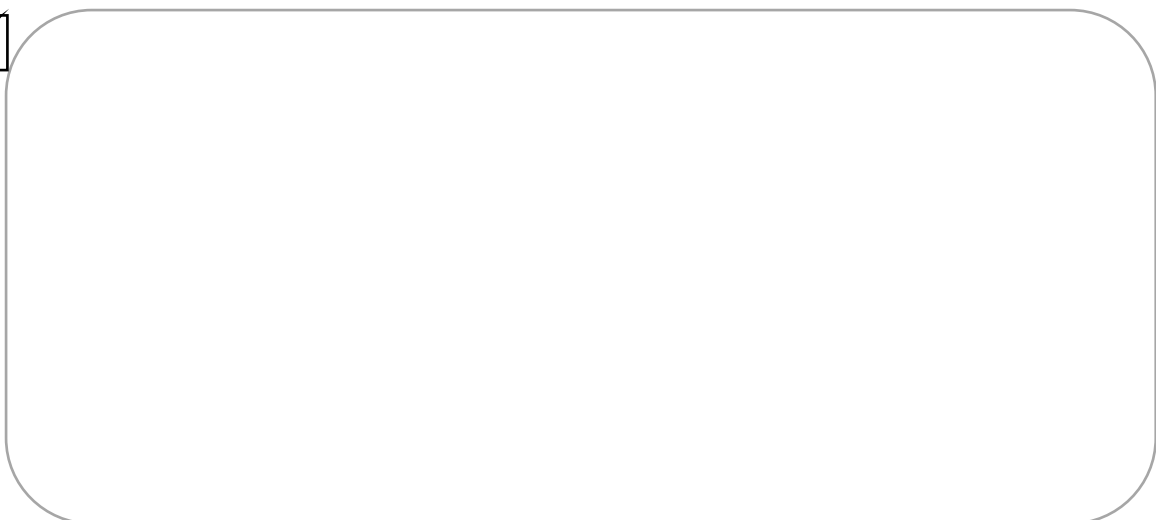
Show a check of your working.

(4)

Use the space below to check clearly how you get your answer.



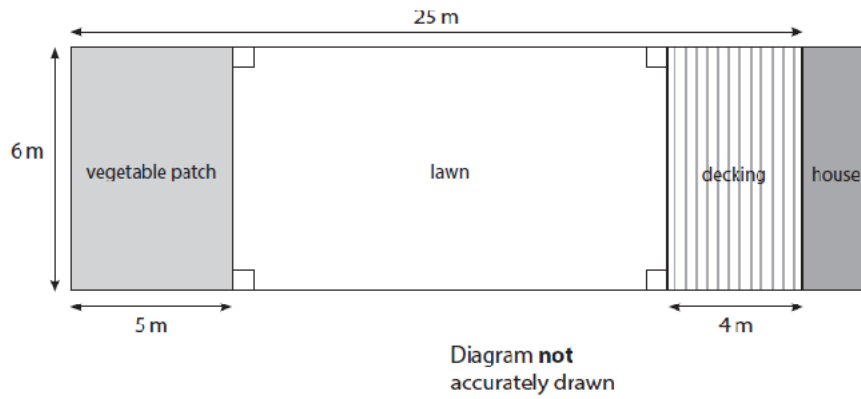
Write your check in the space below.



Area

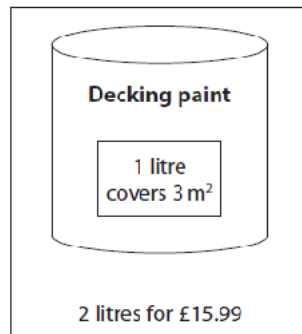
5) Kay is going to do some work in her garden.

Her garden is in the shape of a rectangle.



Kay wants to paint the decking.

She finds this paint.



Kay thinks she can buy enough paint to cover the decking for less than £65.

(a) Is Kay correct?

Show why you think this.

(6)

Area

Use the space below to show clearly how you get your answer.

Kay wants to plant flowers around the edges of the lawn.

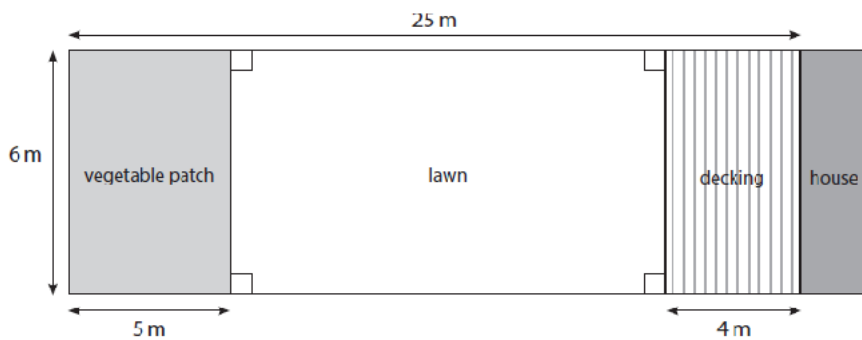


Diagram not accurately drawn

(b) What is the total length around the edges of the lawn?

Show a check of your working.

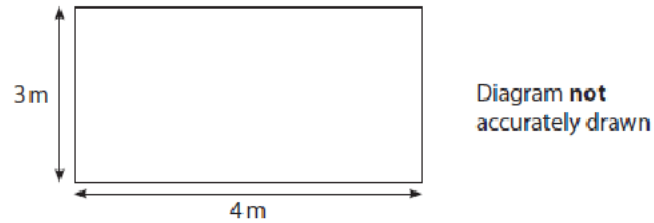
(4)

Area

6) Kurt works at a treetop adventure park.

He needs to cover the roofs of 8 treehouses with paint once.

Each treehouse roof is in the shape of a rectangle 4m by 3m.



Kurt has 9 tins of paint.

Each tin of paint contains 5 litres.

Kurt reads this label



Has Kurt got enough paint?

(5)

Use the space below to show clearly how you get your answer.

Large rounded rectangular area for showing the solution.

Area

7) Mikael plays football.

He is preparing for fitness tests.

The first test is to run 1600 m as quickly as possible.

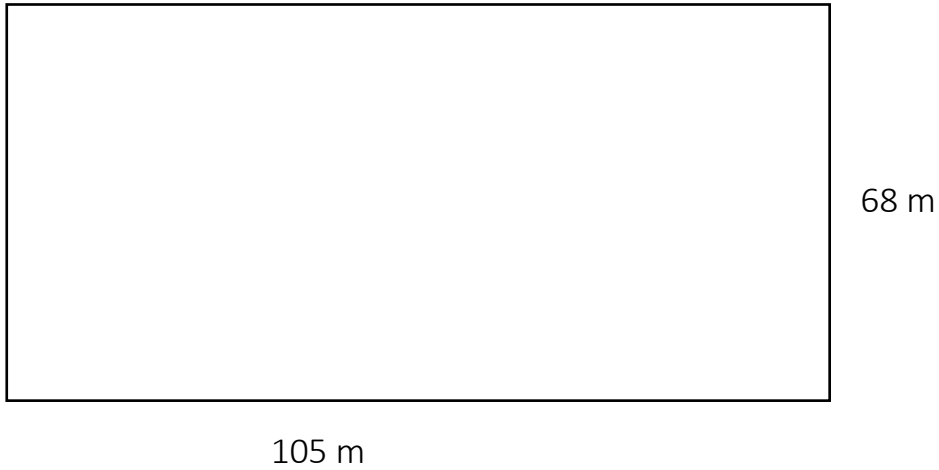


Diagram **not**
accurately drawn

Mikael runs along the perimeter of this pitch 4 times.

(a) Does Mikael run a total distance of 1600m?

(3)

Use the space below to show clearly how you get your answer.

A large rounded rectangular box intended for the student to show their working for the problem.

Area

Mikael does a sprint and turn test to test measure his fitness level.

He does this 5 times.

Here are his results in seconds.

25.1 24.3 26.8 27.6 29.2

Mikael must have a mean time less than 27 seconds to pass the test.

(b) Does Mikael pass the test?

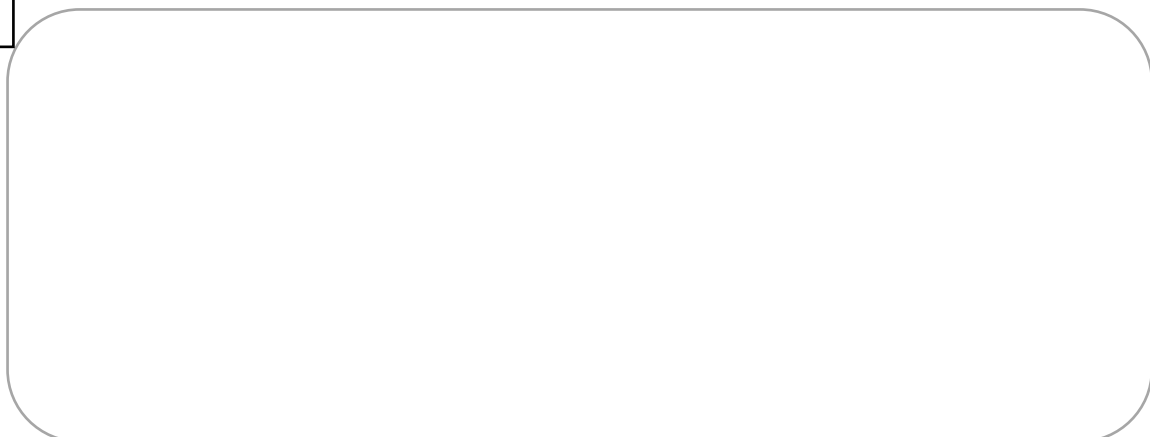
Show a check of your working.

(4)

Use the space below to show clearly how you get your answer.



Use the space below to show your check.



Area

Mikael wants to draw a graph to show the times for these 5 tests.

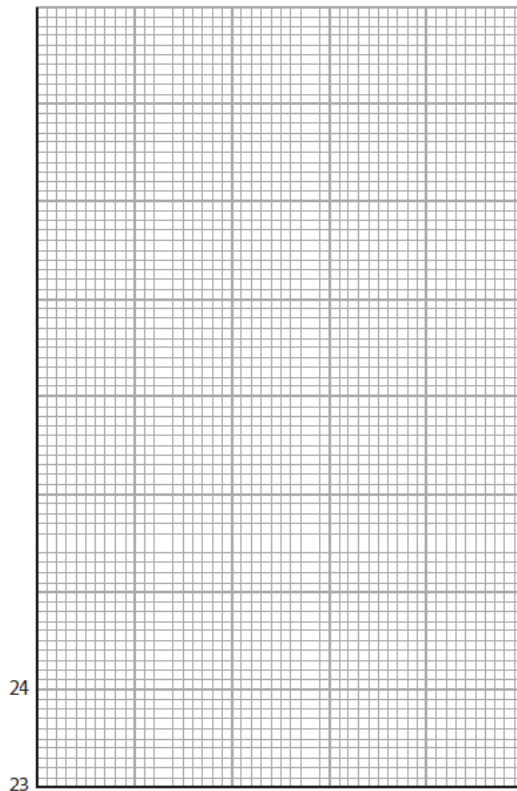
test	A	B	C	D	E
time (seconds)	25.1	24.3	26.8	27.6	29.2

Mikael starts to draw a graph to show this information.

(c) Complete the graph for Mikael.

(3)

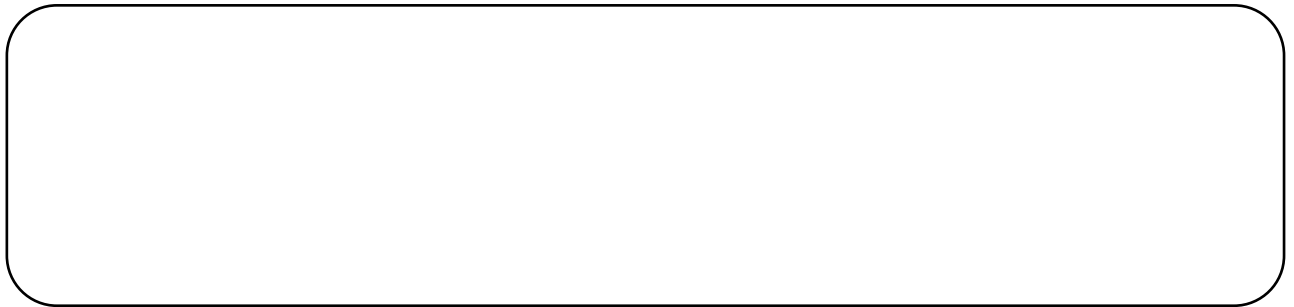
Use the graph paper and the scale below.



Simple Interest

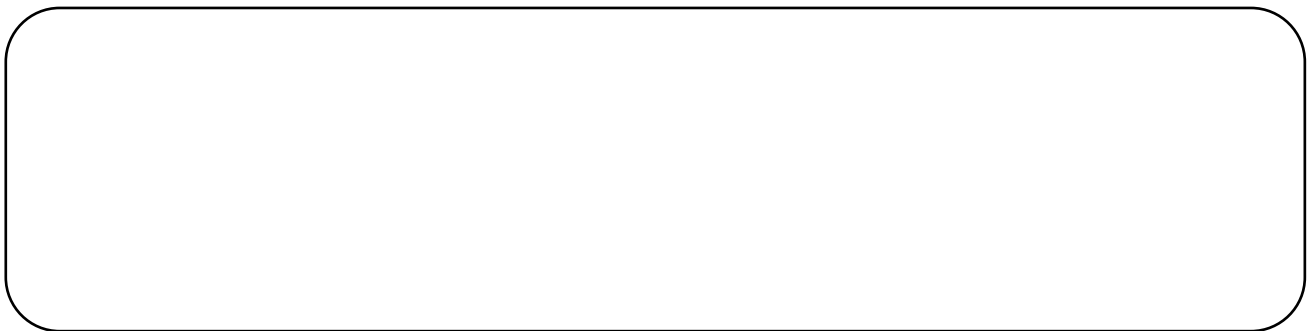
1) Meg has £1200 in her savings account.
The account pays 5% simple interest per year.
How much interest will she earn in 4 years?

(2)



2) Jay is paid £2000 each month.
He saves 6% of the £2000 each month.
How many months will it take Jake to save £480?

(3)



Simple interest

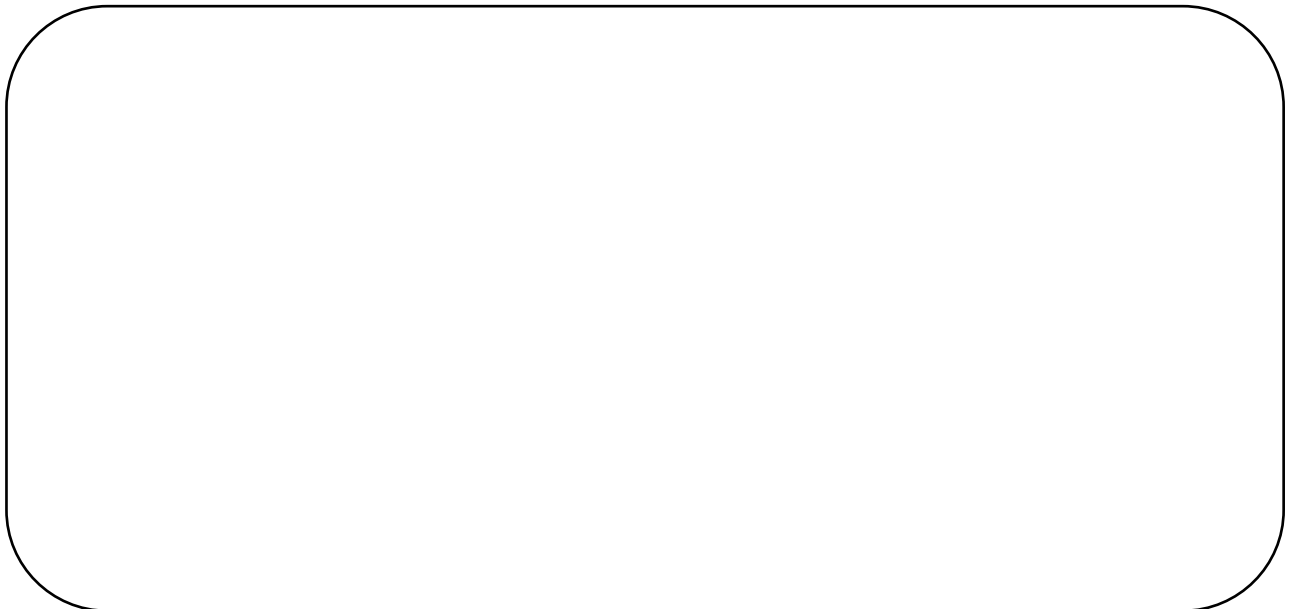
3) The same type of computer is sold in two shops.

<p>Computer World</p> <p>Beta computer</p> <p>Normal price: £359</p> <p>15% off normal price</p>

<p>Logic</p> <p>Beta computer</p> <p>Pay £110 now</p> <p>And pay 12 instalments</p> <p>of £16.80 per month</p>

What is the difference in the cost of a Beta computer in Computer World and the cost of a Beta computer in Logic?

(5)

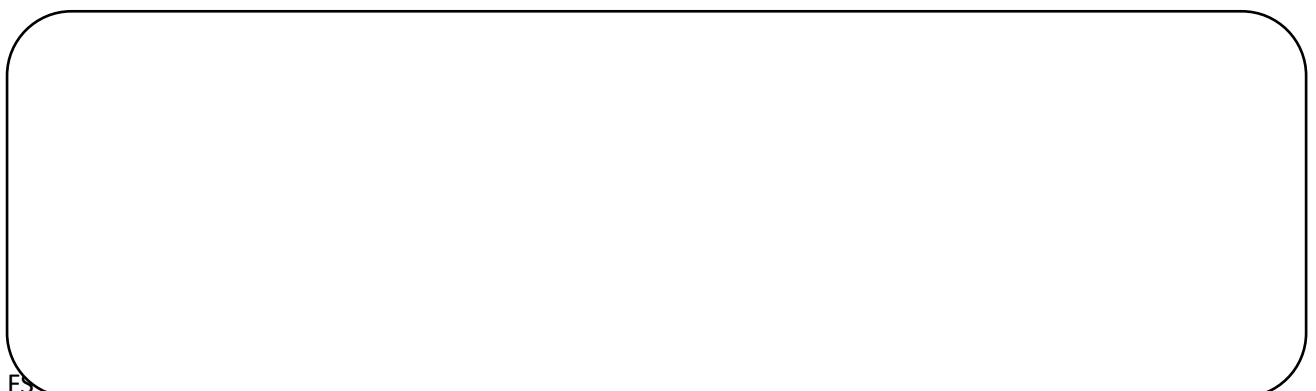


4) Chris borrows £6000 at a simple interest rate of 10% per year.

He pays the money back after 4 years.

How much does he pay back in total?

(3)



Simple interest

5) Bhavin buys a car in a sale.

Before the sale, the cost of the car was £6720

In the sale, the cost of every car is reduced by 20%.

Bhavin pays a deposit of £1500

He will pay the rest of the cost in 24 equal monthly payments.

Work out the amount of each monthly payment.

(5)



Simple interest

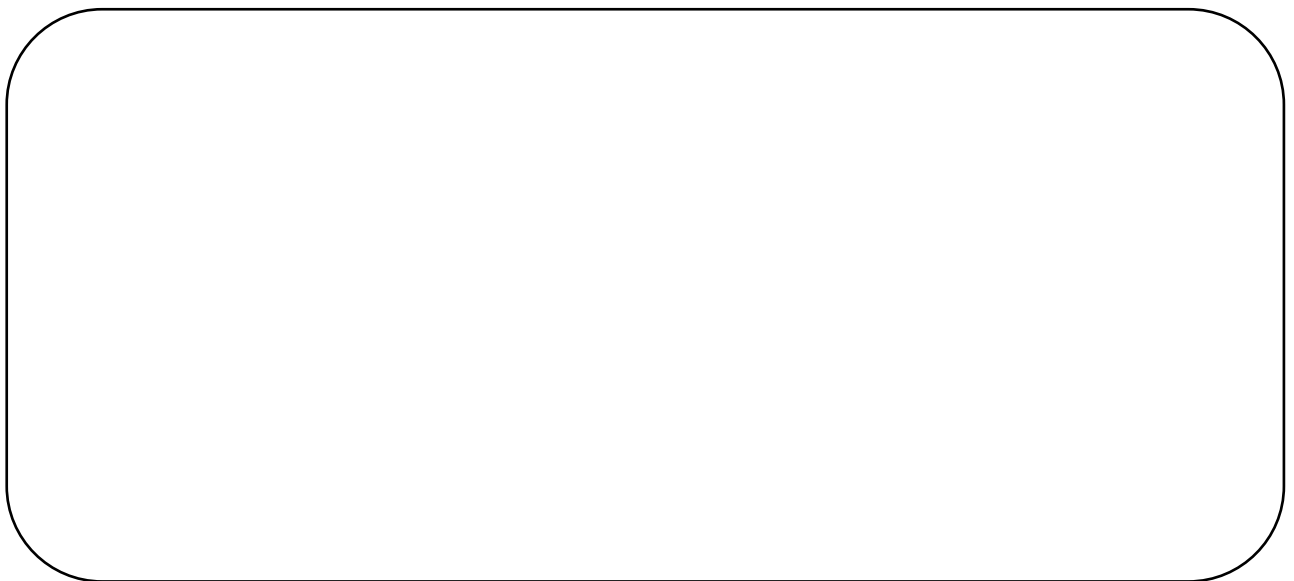
6) Here is information about two investments

Investment A Invest £2400 for 3 years and get £ 8 each month

Investment B Invest £2400 for 3 years at a rate of 3.5% per year simple interest.

Which is the better investment?

(5)



Volume

1) Rosa makes candles to sell. Each candle of a cuboid has a height of 9cm
The sides of each candle is 3cm.

Rosa needs to know the volume of one candle.

Work out the volume of one candle. Remember to give units with your answer.

(3)



1) Ben wants to keep rabbits in his garden.

The rabbits will live in a rabbit run and hutch.

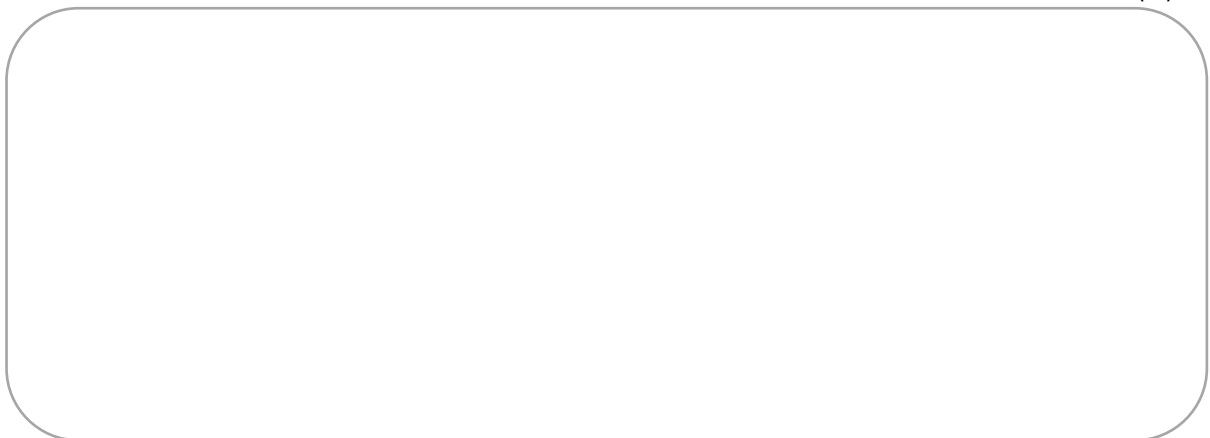
Ben wants to have 2 rabbits.

He knows that each rabbit needs floor space of 4500cm^3 .

Ben has a hutch with a floor space of 9500cm^3 .

- a) Is this floor space big enough for 2 rabbits?
Show why you think this.

(2)



Volume

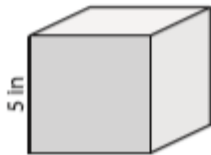
Ben has a lawn in his garden.

The lawn is in the shape of a rectangle 7 meters by 8 meters.

a) What is the area of the lawn?

(2)

2) Find the volume of this cube



(2)

Volume = _____

3) Find the volume of a cube that has the side length of 8 ft

(2)

Volume = _____

Volume

- 4) The length of each side of a cubical wooden block is 16 inches. What is the volume of the block?

(2)

Volume = _____

- 5) Josh is constructing a stage at a music concert.

The stage is in the shape of a cuboid. It is 2m high.



The stage is 4m long and 12m wide

- a) What is the volume of stage?
Remember to give the units with your answer

(2)

Volume = _____

b) Use the reverse calculations to check your answer.

(1)



Charts & Graphs

1) Teddy works at a cinema.

He sells frozen drinks in 4 different flavours.

Teddy wants to compare the number of sales of each flavour.

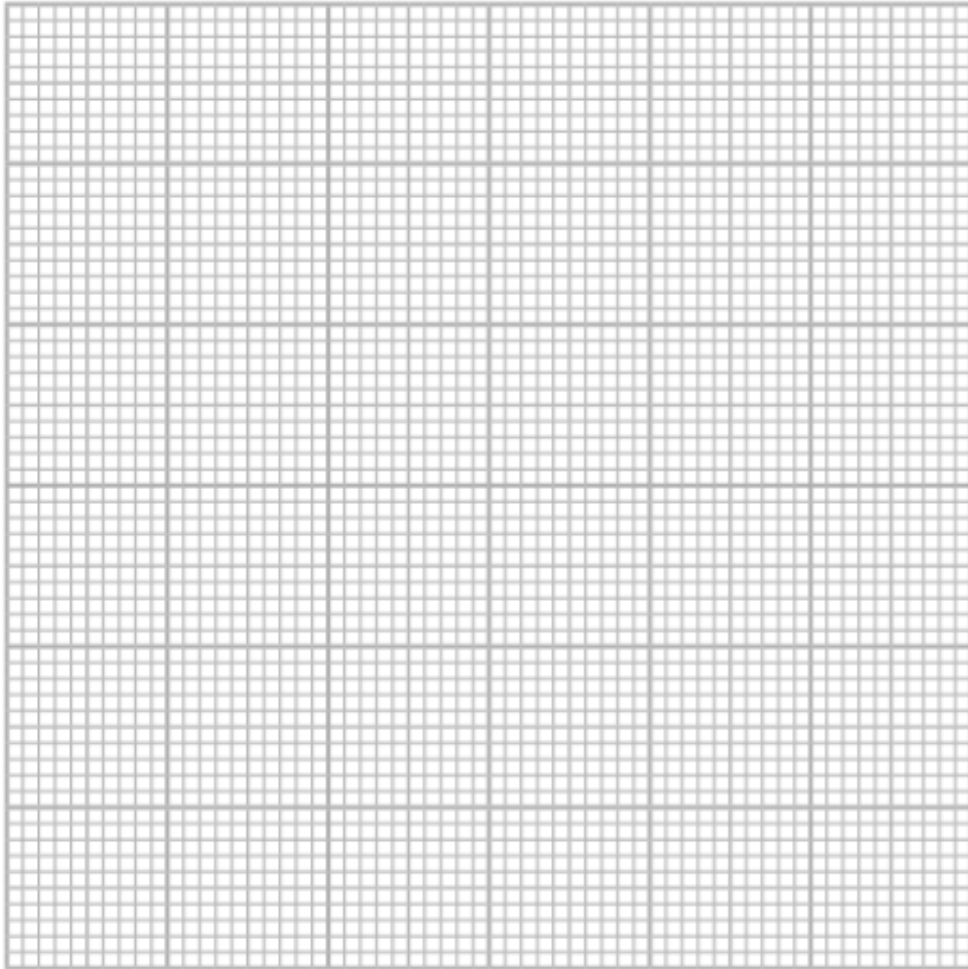
He has this information about the sales last week.

Flavour	Raspberry	Cherry	Lemon	Orange
Number of sales	195	80	155	110

- a) Draw a graph or chart to compare the number of sales of each flavour last week.
Use the graph paper below to draw your graph or chart.

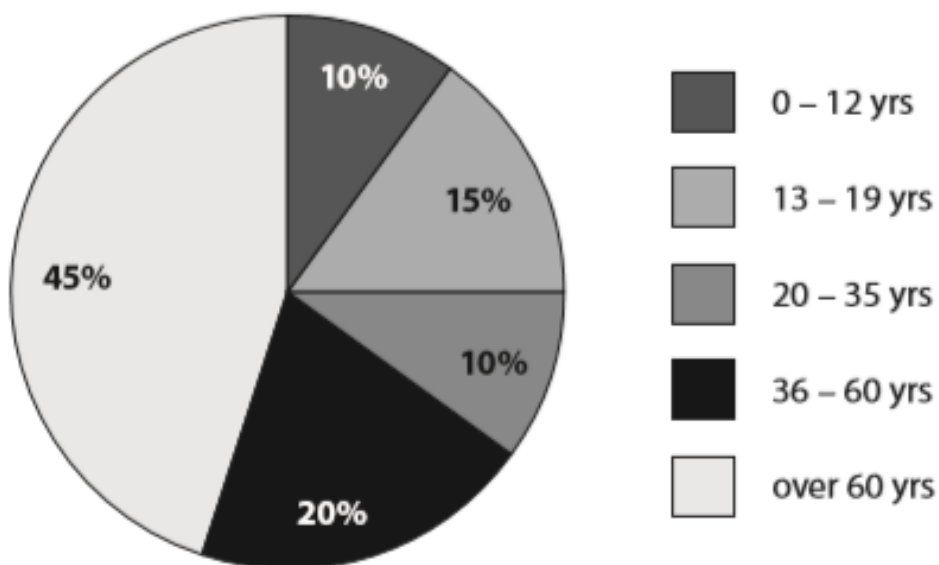
(3)

Charts and Graphs



2) Carry has this information about the age of people who use eye care centre.

Age of people



Carrie says the pie chart shows that a quarter of the people using the eye care centre were between 36 to 56 years old.

Is Carrie correct?

Use the box below to show your answer

(2)

3) The tour company offers different tours.

Charts and Graphs

Olga has this information about the number of people who booked on each tour last year.

Olga wants to show this information in a graph or chart

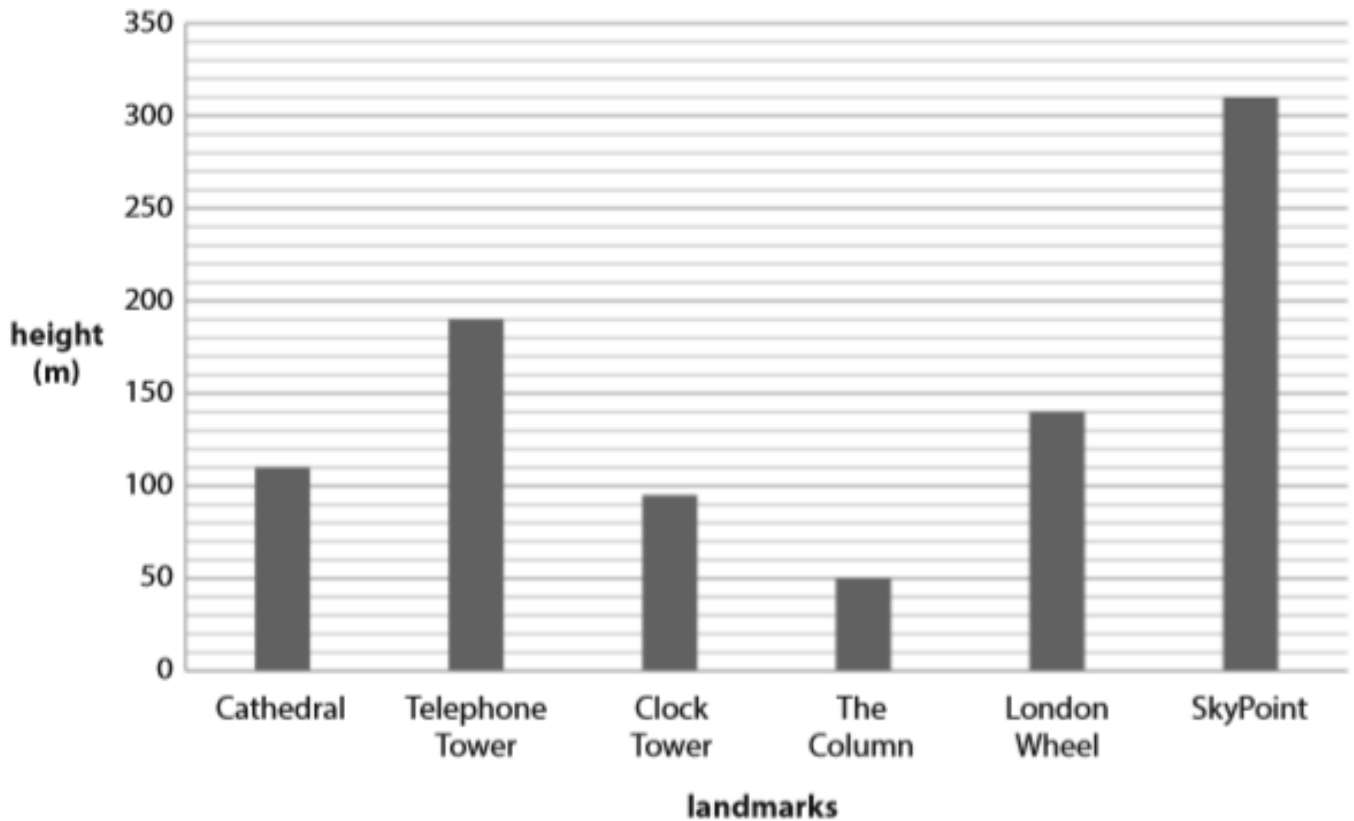
Tour	Walking	Day boat trip	Evening boat trip	Cable car	Lake
Number of people	5500	3000	2400	4500	2600

(3)

a) Draw a suitable graph or chart of Olga



4) Veronica shows her children this chart of the height of some landmarks.



Veronica says to her children ‘the height of the SkyPoint is more than 3 times the height of the Clock Tower’.

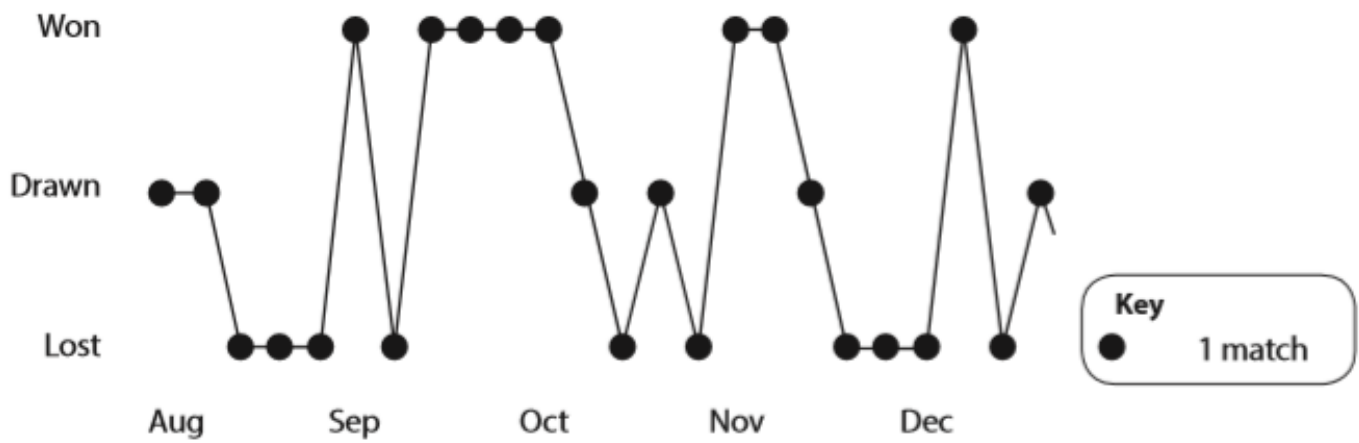
Is she correct?

Use the box below for your answer

(3)

5) Lowton United is a football club

The diagram shows some information about the matches Lowton United played in the league competition from August to December.



A team gets

- 3 points for each match won
- 1 point for each match drawn
- 0 points for each match lost

How many points in total did Lowton United get from the beginning of August to the end of December?

6) Paulo manages the ticket sales for Lowton United.

He is writing a report about ticket sales.

He wants to draw a graph to show the ticket sales for the last 6 matches.

Ticket sales

Match 1	Match 2	Match 3	Match 4	Match 5	Match 6
6200	5600	6400	6800	7200	8300

Paulo starts to draw a graph to show this information.

(3)

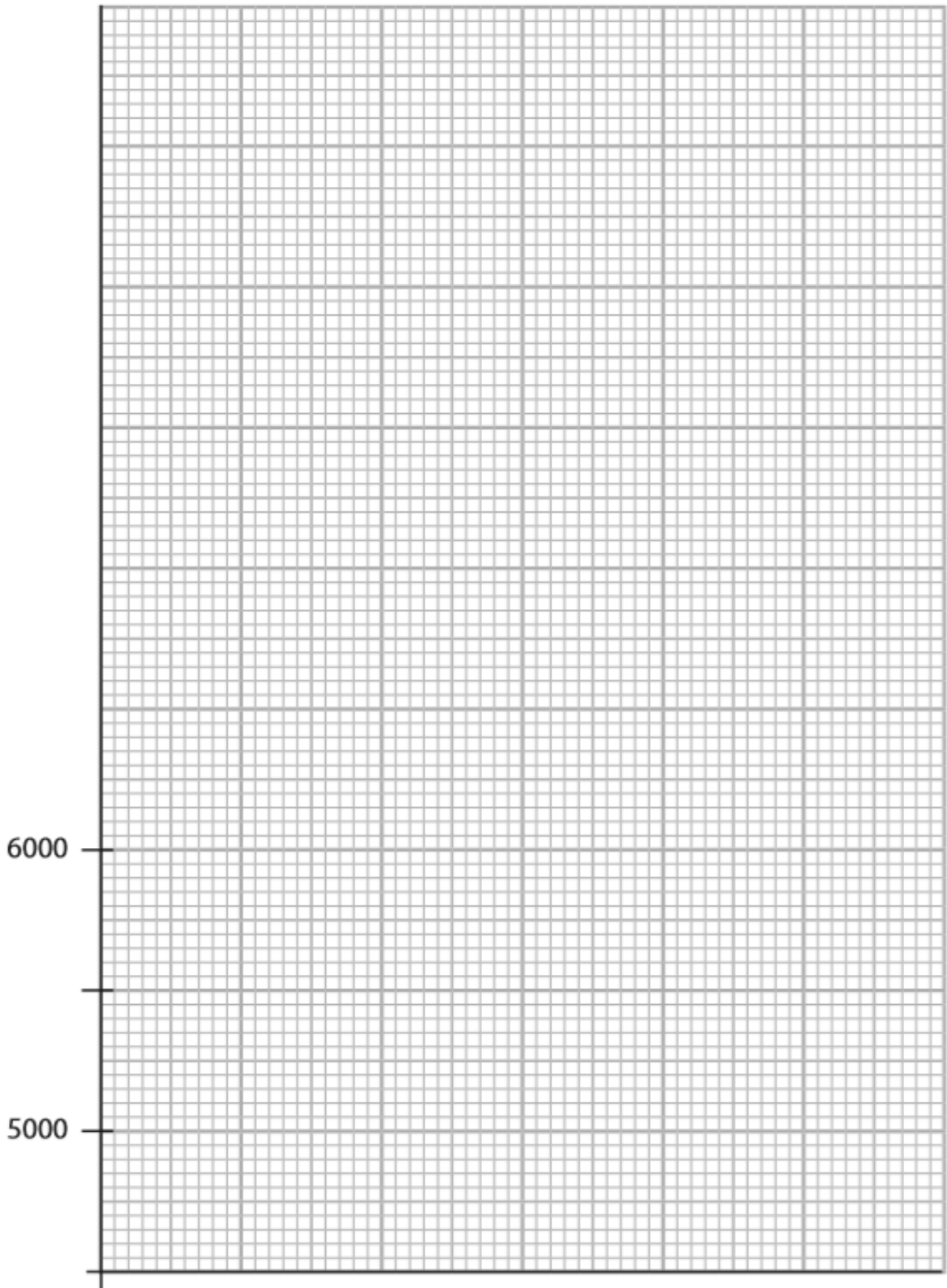
a) Complete the graph for Paulo.

Use the graph paper and the scale on the opposite page.

Paulo wants to write a comment in the report about the ticket sales.

b) Write a comment for the report in the box below

(1)



7) Deenesh is the manager at a hotel. He wants to organise the times his reception team will work between 12:00 and 20:00.

Rosy, Gill, Arek and Tamas all work on the reception team.

The diagram shows the time they work.

Deenesh always needs 3 people working in the reception team.

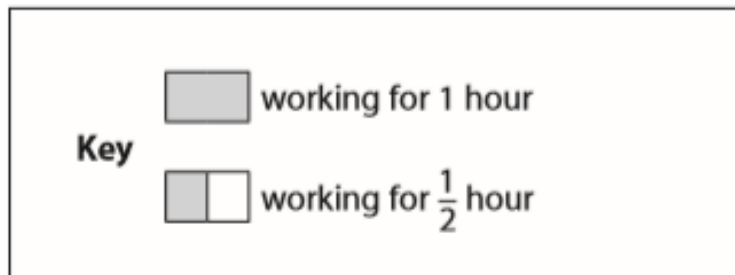
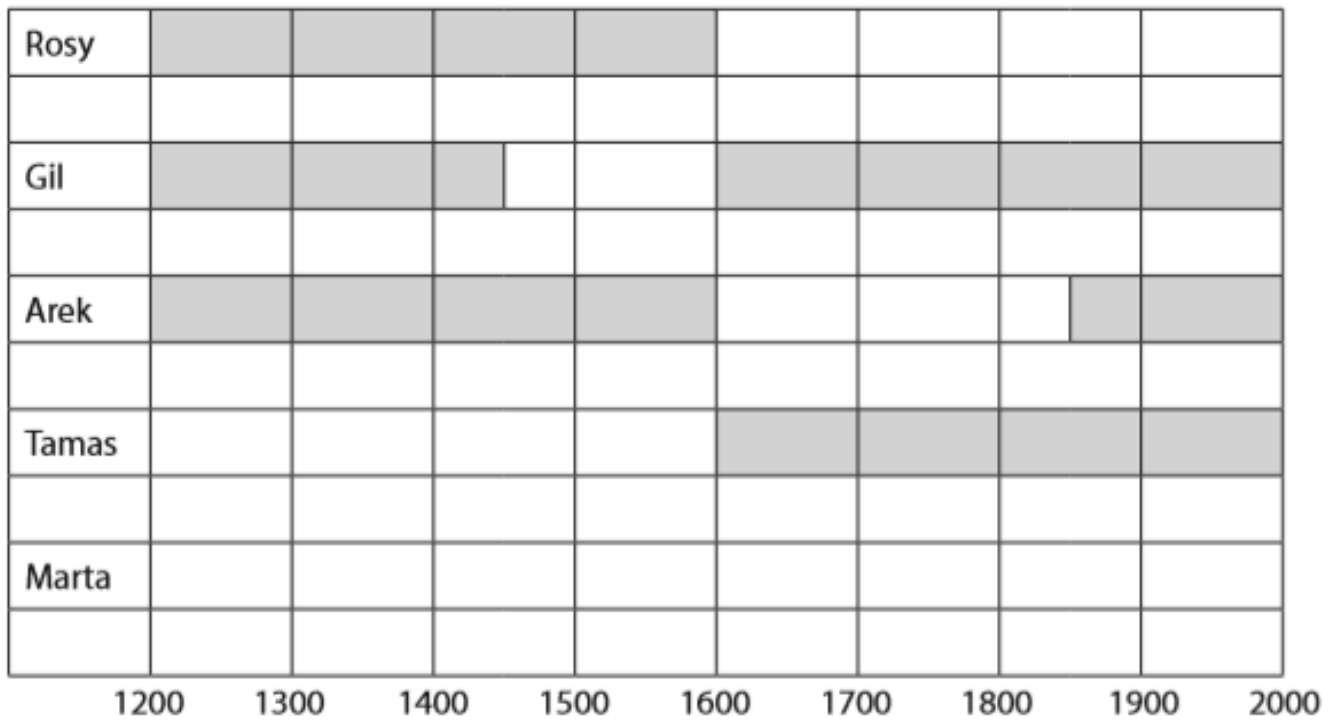
He is going to employ Marta.

Marta will work the extra hours so there are always 3 people working.

(2)

a) Shade the hours Marta will work on the diagram

Charts and Graphs



Fractions, Decimals & Percentages

1) Marta manages the rentals of beach huts.

There are 96 beach huts.

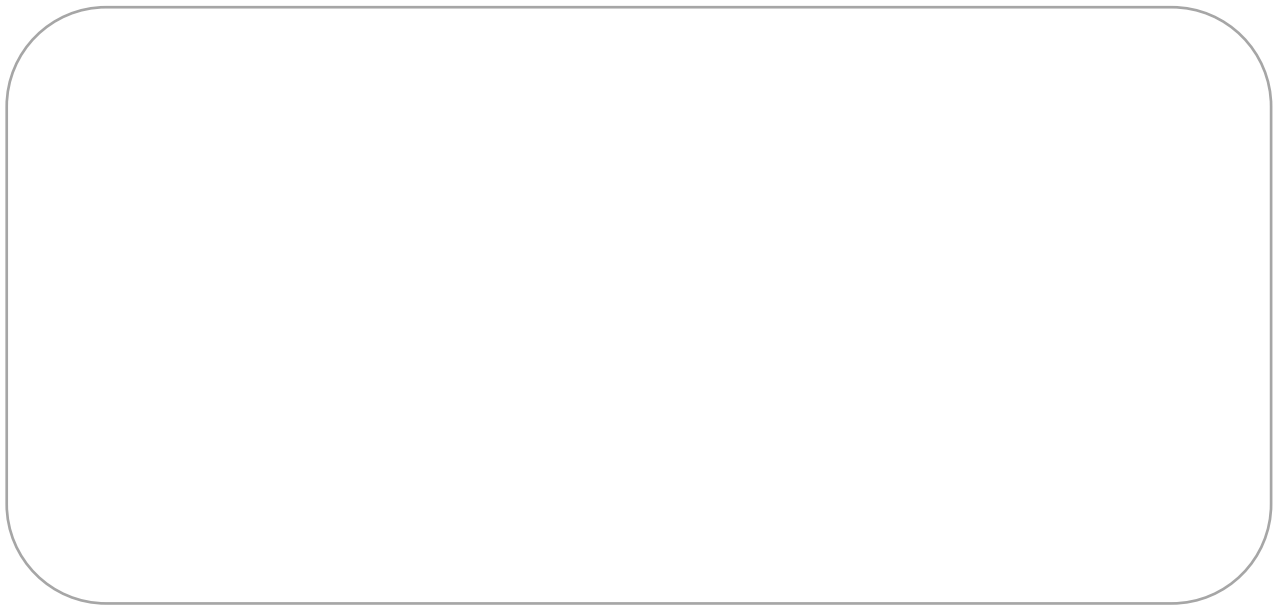
24 of these beach huts are available to rent.

Marta thinks that $\frac{1}{4}$ of the beach huts are available to rent

Is Marta correct?

Show why you think this. Use the box to show clearly how you get your answer.

(2)



2) The table shows the amount of money collected by each team of the rowing event.

Team	Amount collected
A	£2347
B	£3862
C	£3581
D	£1954

Luke was in team A.

He says 'Team A collected $\frac{1}{5}$ of the total amount

Is $\frac{1}{5}$ of the total amount of money collected £2347?

Use the box below to show clearly how you get your answer.

(3)

3) Last year, the company had 18 000 bookings in total.

5400 of these bookings were for boat trips.

Olga says ' $\frac{1}{3}$ ' of all our bookings last year were for boat trips.

Is Olga correct?

Show a check of your working

Show why you think this. Use the box to show clearly how you get your answer.

(3)

A large, empty rounded rectangular box with a thin grey border, intended for the student to show their working and reasoning for the problem.

4) In the hotel Winston and Karen see this offer

Walking Tour
Normal price
£250 Croation Kuna
Book today and save 15%

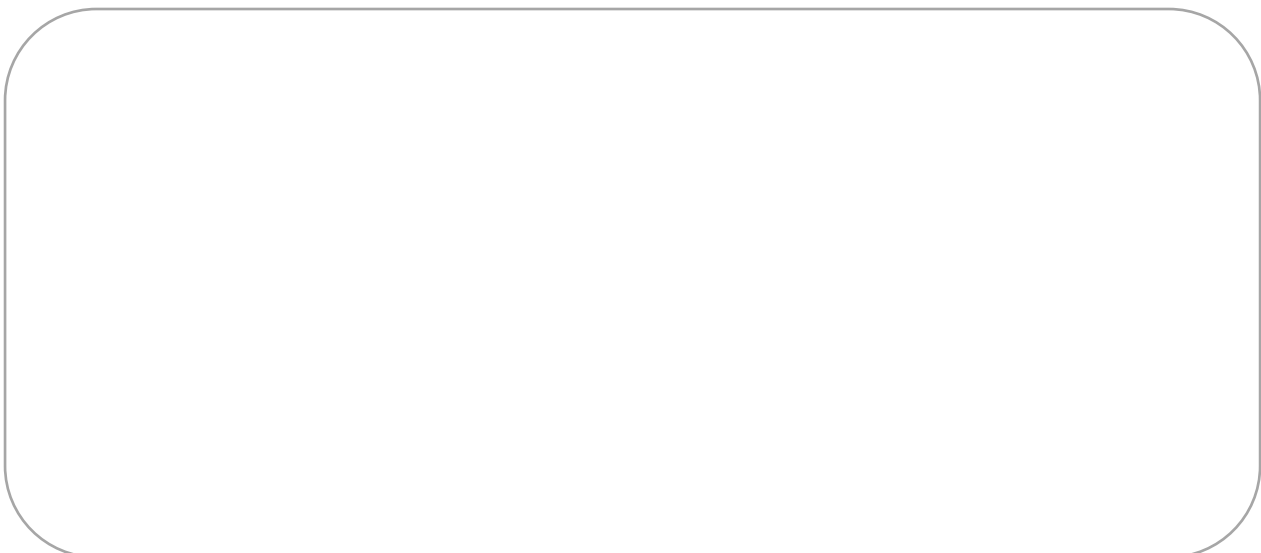
Work out 15% of £250

Use the box to show clearly how you get your answer. (2)

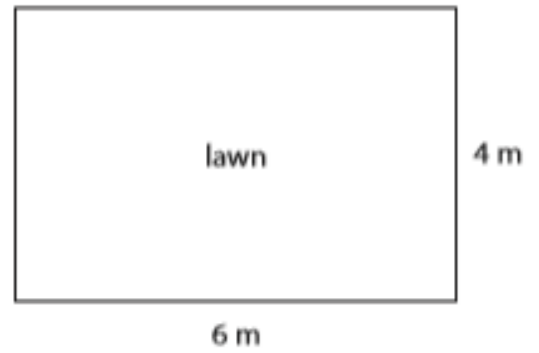


5) Ruth gets paid £160 every two weeks.
She keeps £30 of this amount to pay for household bills.
She thinks that £30 is 20% of £160. Is Ruth correct?

(2)



- 6) Jane has a lawn in front of her house.
The lawn is in the shape of a rectangle 6m by 4 m.
She buys one box of lawn feed.
One box is enough for 100 m² of lawn
Jane says, 'my lawn needs $\frac{1}{4}$ of this box'.



Will $\frac{1}{4}$ of this box be enough for the lawn?

Use the box to show clearly how you get your answer. (4)

- 7) There is a special offer for afternoon tea at the hotel.

Afternoon Tea
Normal price £22
Book early and save 15%

Work out 15% of £22.

Show a check of your working (3)

Probability

1) Lowton United is taking part in a cup competition.

There are 8 teams including Lowton United in the competition.

To decide who will play who in the next round, the team names are chosen at random from a bag.

One team is chosen at a time.

(1)

What is the likelihood that Lowton United is chosen from the bag first?

Tick a box to show your answer.

Impossible

Unlikely

Even chance

Likely

Certain

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

2) Jean has baked 30 cupcakes.

15 cupcakes are lemon and 15 cupcakes are chocolate.

Jean picks up a cupcake at random to decorate it with butter cream.

What is the likelihood of the cupcake being lemon?

Explain why you think this in the box below.

(1)

3) Norman sells 200 raffle tickets.

The prize for the raffle is a basket of fruit.

Mrs Brown buys 3 of these raffle tickets.

(1)

What is the likelihood of Mrs Brown winning the raffle?

Tick a box to show your answer.

--	--	--	--	--

Probability

Impossible	Unlikely	Even	Likely	Certain

4) Don needs to pick a local charity to give some of the money to. He has these charities to pick from:

- Cats home
- Local hospital
- Children’s centre
- Dogs home

Don picks one charity at random. (1)

What is the likelihood that Don picks an animal?

Tick a box to show your answer below.

Very likely	Likely	Even	Unlikely	Very unlikely

5) There is a lucky dip for a children at the café on Monday.
Each child who has a go on the lucky dip wins a prize.

There are a total of 40 prizes.

The prizes are:

- 20 red lollipops
- 10 green lollipops
- 5 yellow lollipops
- 5 blue lollipops

Bradley is the first child to have a go on the lucky dip.

What is the likelihood that Bradley wins a blue lollipop?

Tick a box to show your answer.

Impossible

Unlikely

Even chance

Likely

Certain

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>