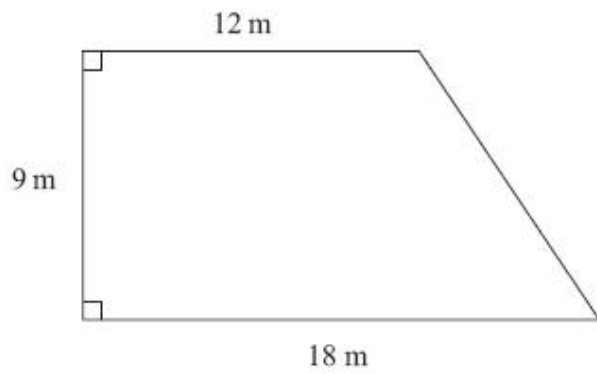


# **BIG MARK QUESTIONS**

Q1. Here is a diagram of Jim's garden. **(NON CALCULATOR)**



Jim wants to cover his garden with grass seed to make a lawn.

Grass seed is sold in bags.

There is enough grass seed in each bag to cover  $20 \text{ m}^2$  of garden.

Each bag of grass seed costs £4.99

Work out the least cost of putting grass seed on Jim's garden.

(Total for Question is 4 marks)

Q2. A company sells boxes to factories. **(CALCULATOR)**

Fred buys boxes.

The boxes are sold in packs of 1000

Each pack costs £193.86

Fred orders 3 packs of boxes.

He gets a discount on his total order.

The table shows the discount he will get.

Work out the total cost of the order after the discount.

You must show your working.

Total Order	Discount
£100 - £300	5%
£301 - £400	10%
£401 and above	15%

(Total for Question is 5 marks)

Q3. Greg sells car insurance and home insurance. **(NON CALCULATOR)**

The table shows the cost of these insurances.

Insurance	car insurance	home insurance
Cost	£200	£350

Each month Greg earns  
£530 basic pay

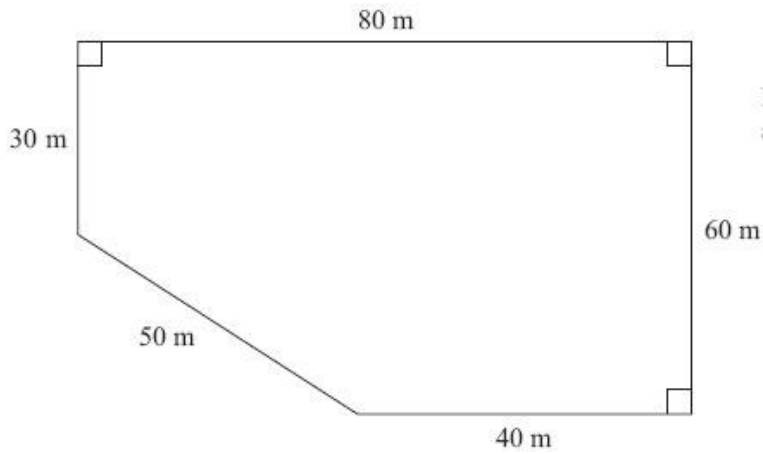
5% of the cost of all the car insurance he sells  
and 10% of the cost of all the home insurance he sells

In May Greg sold 6 car insurances and 4 home insurances

Work out the total amount of money Greg earned in May.

(Total for Question is 5 marks)

Q4. The diagram shows the plan of a playground. **(NON CALCULATOR)**



Bill is going to cover the playground with tarmac. It costs £2.56 to cover each square metre with tarmac. Work out the total cost of the tarmac Bill needs. (Total for Question is 4 marks)

Q5. Railtickets and Cheaptrains are two websites selling train tickets.

**(NON CALCULATOR)**

Each of the websites adds a credit card charge and a booking fee to the ticket price.

**Railtickets**

Credit card charge: 2.25% of ticket price

Booking fee: 80 pence

**Cheaptrains**

Credit card charge: 1.5% of ticket price

Booking fee: £1.90

Nadia wants to buy a train ticket.

The ticket price is £60 on each website.

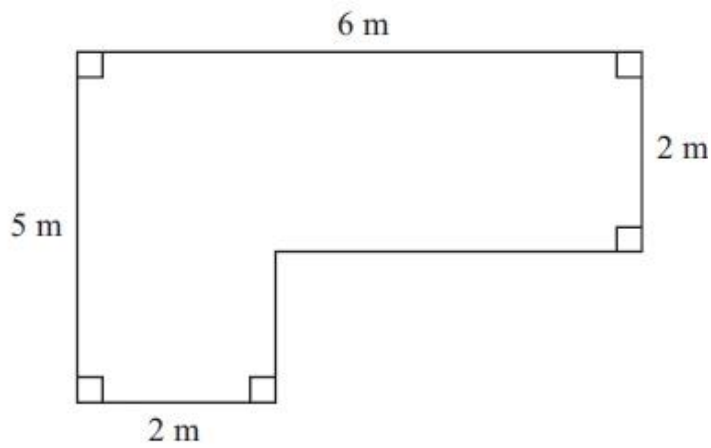
Nadia will pay by credit card.

Will it be cheaper for Nadia to buy the train ticket from Railtickets or from Cheaptrains?

(4 marks)

Q6. The diagram shows the plan of the floor of Mrs Phillips' living room.

**(NON CALCULATOR)**



Mrs Phillips is going to cover the floor with floor boards.

One pack of floor boards will cover  $2.5 \text{ m}^2$ .

How many packs of floor boards does she need?

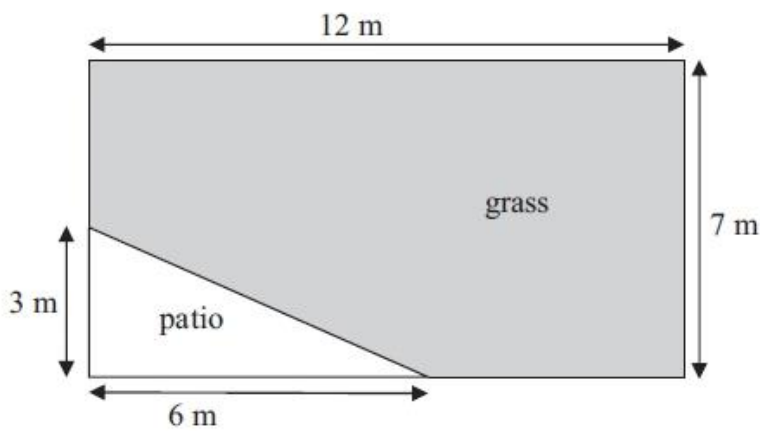
You must show your working.

(Total for Question is 4 marks)

Q7. Mrs Kunal's garden is in the shape of a rectangle. **(NON CALCULATOR)**

Part of the garden is a patio in the shape of a triangle.

The rest of the garden is grass.



Mrs Kunal wants to spread fertiliser over all her grass.

One box of fertiliser is enough for  $32 \text{ m}^2$  of grass.

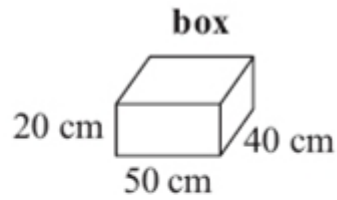
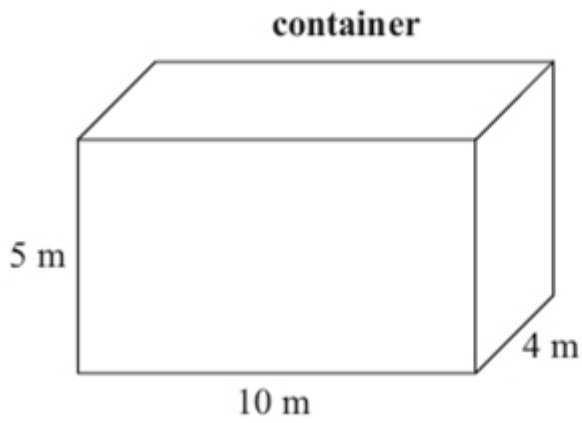
How many boxes of fertiliser will she need?

You must show your working.

(Total for Question is 4 marks)



Q8. Marc drives a truck. **(NON CALCULATOR)**



The truck pulls a container.

The container is a cuboid 10 m by 4 m by 5 m.

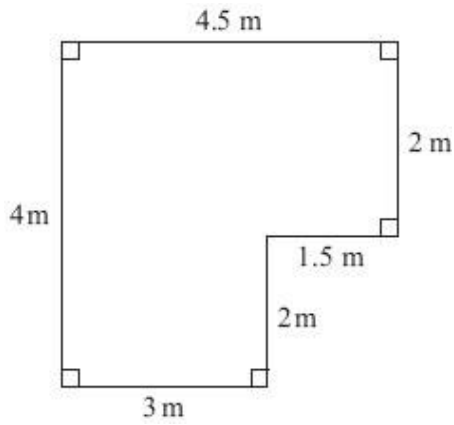
Marc fills the container with boxes. Each box is a cuboid 50 cm by 40 cm by 20 cm.

Show that Marc can put no more than 5000 boxes into the container.

(4 marks)

Q9. The diagram shows the floor plan of Jill's dining room.

**(NON CALCULATOR)**



Jill is going to cover the floor with wooden floorboards.

The floorboards are sold in packs.

One pack of floorboards will cover  $2.25 \text{ m}^2$ .

Work out how many packs Jill needs.

You must show all your working.

(Total for Question is 4 marks)

Q10. Petra booked a family holiday. **(NON CALCULATOR)**

The total cost of the holiday was £3500 plus VAT at 20%.

Petra paid £900 of the total cost when she booked the holiday.

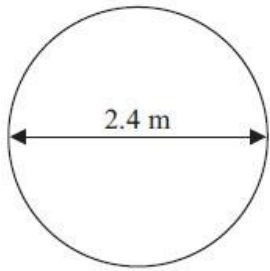
She paid the rest of the total cost in 6 equal monthly payments.

Work out the amount of each monthly payment.

(Total for Question is 5 marks)

# **EXTENSION PACK**

Q1. The diagram shows a flower bed in the shape of a circle. **(CALCULATOR)**



The flower bed has a diameter of 2.4 m.

Sue is going to put a plastic strip around the edge of the flower bed.

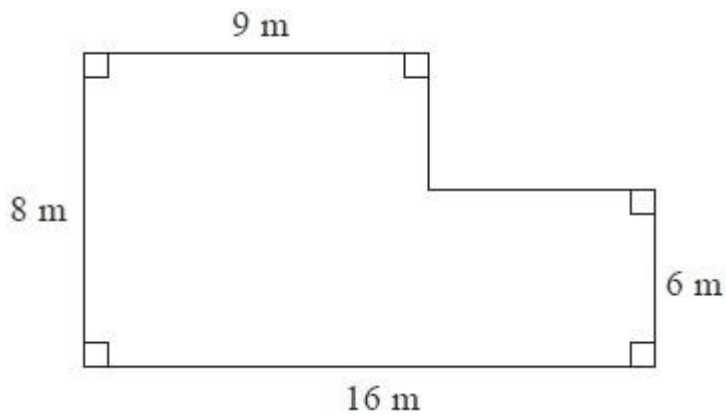
The plastic strip is sold in 2 metre rolls.

How many rolls of plastic strip does Sue need to buy?

You must show all your working.

(Total for Question is 4 marks)

Q2. The diagram shows the floor of a village hall. **(NON CALCULATOR)**



The caretaker needs to polish the floor.

One tin of polish normally costs £19

One tin of polish covers  $12 \text{ m}^2$  of floor.

There is a discount of 30% off the cost of the polish.

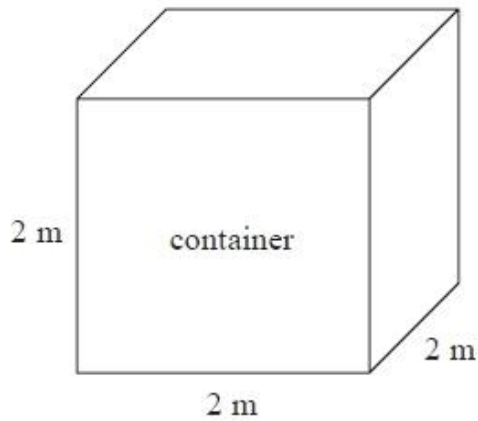
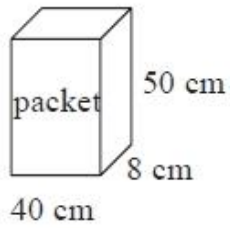
The caretaker has £130

Has the caretaker got enough money to buy the polish for the floor?

You must show all your working.

(Total for Question is 5 marks)

Q3. Ali has some packets. **(NON CALCULATOR)**



Each packet has dimensions 40 cm by 8 cm by 50 cm.

Ali fills a container with these packets.

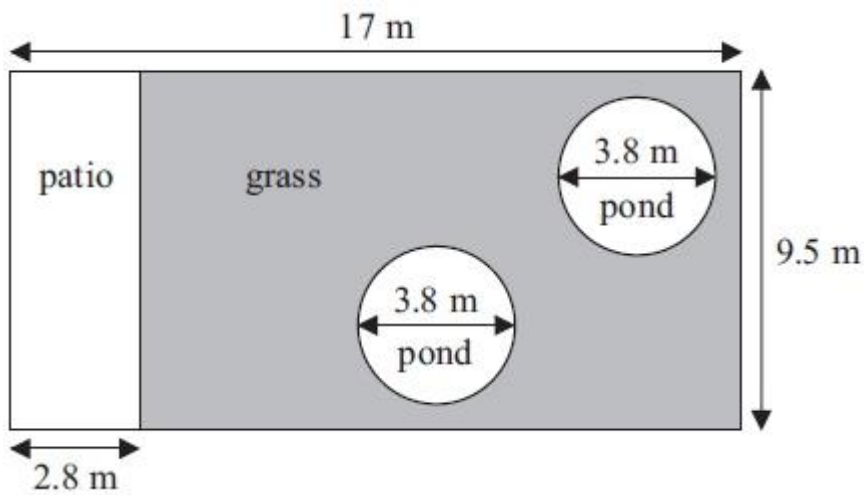
The container is a cube of side 2 m.

Ali fills the container completely with these packets.

Work out the number of packets.

(Total for Question is 4 marks)

Q4. Mr Weaver's garden is in the shape of a rectangle. **(CALCULATOR)**



In the garden there is a patio in the shape of a rectangle and two ponds in the shape of circles with diameter 3.8 m. The rest of the garden is grass.

Mr Weaver is going to spread fertiliser over all the grass.

One box of fertiliser will cover  $25 \text{ m}^2$  of grass.

How many boxes of fertiliser does Mr Weaver need?

You must show your working.

(Total for Question is 5 marks)



Q5. The diagram shows a patio in the shape of a rectangle.

**(NON CALCULATOR)**

The patio is 3.6 m long and 3 m wide.

Matthew is going to cover the patio with paving slabs.

Each paving slab is a square of side 60 cm.

Matthew buys 32 of the paving slabs.

(a) Does Matthew buy enough paving slabs to cover the patio?

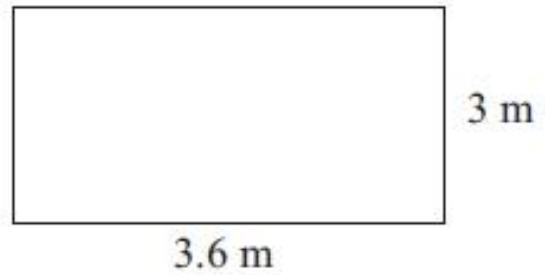
You must show all your working.

(3 marks)

The paving slabs cost £8.63 each.

(b) Work out the total cost of the 32 paving slabs.

(3 marks)



Q6. Henry is thinking about having a water meter. **(CALCULATOR)**

**Water Meter**

A charge of £28.20 per year

**plus**

91.22p for every cubic metre of water used

**1 cubic metre = 1000 litres**

**No Water Meter**

A charge of £107 per year

These are the two ways he can pay for the water he uses.

Henry uses an average of 180 litres of water each day.

Henry wants to pay as

little as possible for the water he uses.

Should Henry have a water meter?

(5 marks)

Q7. Ella wants to invest £6000 in a savings account for 2 years. **(CALCULATOR)**

<p><b>Northway Bank</b></p> <p>Compound interest</p> <p>of</p> <p>3.8% per annum</p>
--

<p><b>Portland Bank</b></p> <p>Compound interest</p> <p>of</p> <p>5% per annum in year 1</p> <p>3.2% per annum in year 2</p>
--

She finds information about savings accounts at two different banks. Ella wants to choose the bank that pays the greater total amount of interest for the 2 years.

Which bank should she choose?  
You must show all your working.

(Total for Question is 4 marks)

Q8. Viv wants to invest £2000 for 2 years in the same bank. **(CALCULATOR)**  
At the end of 2 years, Viv wants to have as much money as possible.

**The International Bank**

Compound Interest

4% for the first year

1% for each extra year

**The Friendly Bank**

Compound Interest

5% for the first year

0.5% for each extra year

Which bank  
should she  
invest her £2000  
in?

(4 marks)

Q9. One day a supermarket has 8420 customers. **(NON CALCULATOR)**

65% of the customers pay with a debit card.

$\frac{1}{5}$

of the customers pay with a credit card.

The rest of the customers pay with cash.

Work out how many customers pay with cash.

(Total for Question is 4 marks)

Q10. Mrs Evans is planning a trip to the zoo. **(NON CALCULATOR)**  
She finds out this information.

July						
M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Off peak

Peak

Ticket Prices		
	Peak	Off peak
Adult	£20.50	£19.50
Child	£15.50	£15.00
Senior citizen	£19	£18

Family Offer	
10% Discount	2 adults and 2 children or 1 adult and 3 children

Mrs Evans will go to the zoo on Friday 17th July.

She will need to buy tickets for 1 adult and 3 children.

Mrs Evans wants to buy the tickets as cheaply as possible.

Work out the total cost of the tickets.

(Total for Question is 4 marks)

Q11. The Kumar family are going to go to New York. **(NON CALCULATOR)**

They will go with Highway Airlines or Jetstream Airlines.

The tables show how much it costs for each adult and each child to go with these airlines.

Highway Airlines

Date	Adult	Child
4 – 10 July	£475	£280
11 – 17 July	£488	£282
18 – 24 July	£516	£304
25 – 31 July	£506	£297
1 – 7 August	£462	£251
8 – 14 August	£430	£238
15 – 21 August	£421	£235
22 – 28 August	£399	£221

Jetstream Airlines

Date	Adult	Child
4 – 10 July	£483	£286
11 – 17 July	£493	£296
18 – 24 July	£526	£315
25 – 31 July	£519	£303
1 – 7 August	£485	£218
8 – 14 August	£429	£245
15 – 21 August	£409	£232
22 – 28 August	£401	£222

Highway Airlines give a discount of 5% of the total cost for booking online.

Jetstream Airlines give a discount of £25 per person for booking online.

The Kumar family are going to New York on 3 August.

They will buy 2 adult tickets and 1 child ticket.

They will book online.

The Kumar family want to pay the lower total cost.

Which airline should they choose?

(Total for Question is 5 marks)

Q12. Mr Brown and his 2 children are going to London by train.

**(NON CALCULATOR)**

An adult ticket costs £24

A child ticket costs £12

Mr Brown has a Family Railcard.

Work out the total cost of the tickets when Mr Brown uses his Family Railcard.

(Total for Question is 4 marks)

**Family Railcard gives**

$\frac{1}{3}$  off adult tickets

60% off child tickets



Q13. 140 children will be at a school sports day. **(NON CALCULATOR)**  
Lily is going to give a cup of orange drink to each of the 140 children.  
She is going to put 200 millilitres of orange drink in each cup.  
The orange drink is made from orange squash and water.  
The orange squash and water are mixed in the ratio 1 : 9 by volume.  
Orange squash is sold in bottles containing 750 millilitres.  
Work out how many bottles of orange squash Lily needs to buy.  
You must show all your working.

(Total for Question is 4 marks)

Q14. Each day a company posts some small letters and some large letters.

**(NON CALCULATOR)**

The company posts all the letters by first class post.

The tables show information about the cost of sending a small letter by first class post and the cost of sending a large letter by first class post.

Small Letter

Weight	First Class Post
0–100 g	60p

Large Letter

Weight	First Class Post
0–100 g	£1.00
101–250 g	£1.50
251–500 g	£1.70
501–750 g	£2.50

One day the company wants to post 200 letters.

The ratio of the number of small letters to the number of large letters is 3 : 2

70% of the large letters weigh 0-100 g.

The rest of the large letters weigh 101-250 g.

Work out the total cost of posting the 200 letters by first class post.

(Total for Question is 5 marks)