

READ

UNDERLINE

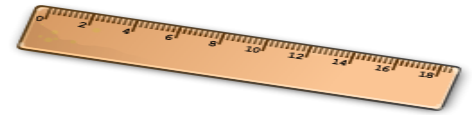
LAYOUT

EVALUATE

REVIEW

R.U.L.E.R Exam Question Practice

Using your R.U.L.E.R and mastering all these questions is all but guaranteed* to raise your grade.



Name: _____

Teacher: _____

Answers (remember they may use a different method) @:

www.bit.ly/usearuler or www.tannermaths.co.uk/ruler



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**obviously we can't actually guarantee it but completing the booklet is a tremendous way to increase the probability of you achieving a higher grade. You need to ensure you see your teacher when you get really stuck on a question.*

Checklist and Contents

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Ratio and Proportion Questions

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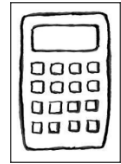
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Q1. There are 150 people on a train.

At the first stop

10 people get off the train

25 people get on the train.

At the next stop

5 people get off the train

16 people get on the train.

(a) How many people are on the train now?

.....

(3)

The train has 240 seats.

80 of the seats are red.

(b) What fraction of the seats are red?

Give your fraction in its simplest form.

.....

(2)

(Total for Question is 5 marks)

Q2. Here are the ingredients needed to make 16 gingerbread men.

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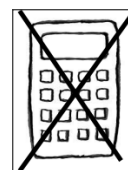


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Ingredients
to make 16 gingerbread men 180 g flour
40 g ginger
110 g butter
30 g sugar

Hamish wants to make 24 gingerbread men.

Work out how much of each of the ingredients he needs.



.....g flour

.....g ginger

.....g butter

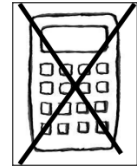
.....g sugar

(Total for Question is 3 marks)



Q3.

Here are the ingredients needed to make 12 shortcakes.



Shortcakes

Makes **12** shortcakes

50 g of sugar
200 g of butter
200 g of flour
10 ml of milk

Liz makes some shortcakes.
She uses 25 ml of milk.

(a) How many shortcakes does Liz make?

.....
(2)

Robert has	500 g of sugar
	1000 g of butter
	1000 g of flour
	500 ml of milk

(b) Work out the greatest number of shortcakes Robert can make.

.....
(2)

(Total for Question is 4 marks)



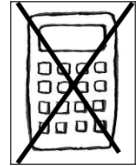
Q4.

5 schools sent some students to a conference.

One of the schools sent both boys and girls.

This school sent 16 boys.

The ratio of the number of boys it sent to the number of girls it sent was 1 : 2



The other 4 schools sent only girls.

Each of the 5 schools sent the same number of students.

Work out the total number of students sent to the conference by these 5 schools.

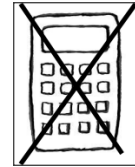
.....

(Total for Question is 4 marks)



Q5. Here are the ingredients needed to make 16 chocolate biscuits.

Chocolate biscuits	
Makes 16 chocolate biscuits	
100 g	of butter
50 g	of caster sugar
120 g	of flour
15 g	of cocoa



Sabrina has 250 g of butter
300 g of caster sugar
600 g of flour
and 60 g of cocoa

Work out the greatest number of chocolate biscuits Sabrina can make.
You must show your working.

.....

(Total for Question is 3 marks)

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Q6.

Linda is buying wool to knit a baby's blanket.

She needs 1800 yards of wool.

Linda chooses some balls of wool.

There are 245 metres of wool in each ball of wool.

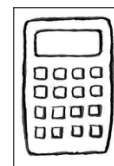
Linda knows that

1 yard is 36 inches

1 inch is 2.54 centimetres

How many balls of wool does Linda need to buy?

You must show all your working.



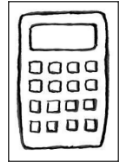
.....
(Total for Question is 4 marks)



Q7.

One day a supermarket has 8420 customers.

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)



Q8.

* Cheryl is selling books and magazines to raise money for charity.

She wants to raise a total of £50

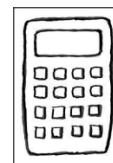
Cheryl sells 46 hardback books for 50p each.

She sells 68 paperback books for 30p each.

She sells magazines for 20p each.

Cheryl has 26 magazines to sell.

Work out if she has enough magazines to sell to reach her £50 target.



(Total for Question is 5 marks)

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Q9.

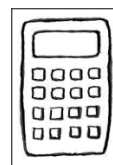
There are 700 students in a college.

All of the students are 16 years old, 17 years old or 18 years old.

$\frac{1}{10}$ of the students are 16 years old.

$\frac{1}{5}$ of the students are 18 years old.

Work out how many of the students are 17 years old.



.....
(Total for Question is 4 marks)

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Q10.

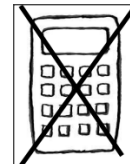
Mr Mason asks 240 Year 11 students what they want to do next year.

15% of the students want to go to college.

$\frac{3}{4}$ of the students want to stay at school.

The rest of the students do not know.

Work out the number of students who do not know.



.....
(Total for Question is 4 marks)



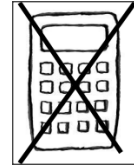
Q11.

* Orange squash is used to make orange drink.

Jill is going to make orange drink for 50 people.

She is going to make 2 full glasses of orange drink for each person.

She needs 250 millilitres of orange drink for each glass.



Here are the instructions for making orange drink.

Mix 1 part of orange squash with 4 parts of water.
--

A one litre bottle of orange squash costs £2

Work out the total cost of the bottles of orange squash Jill needs to buy.

(1 litre = 1000 millilitres)

(Total for Question is 5 marks)

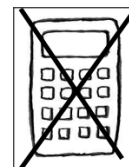


Q12.

Here is a list of ingredients needed to make 12 scones.

Ingredients for 12 scones

220 g self-raising flour
40 g butter
150 ml milk
2 tablespoons sugar



Viv is making scones for 15 people.
She is making 2 scones for each person.

Work out the amount of each ingredient she needs.

Self-raising flour g

Butter g

Milk ml

Tablespoons of sugar

(Total for Question is 3 marks)

**Q13.**

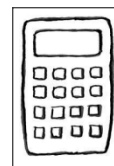
There are 200 people in a cinema.

25% of the people are men.

$\frac{1}{5}$ of the people are women.

The rest of the people are children.

Work out how many children are in the cinema.



.....

(Total for Question is 3 marks)



Q14.

Last year, Jora spent

30% of his salary on rent

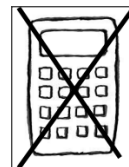
$\frac{2}{5}$ of his salary on entertainment

$\frac{1}{4}$ of his salary on living expenses.

He saved the rest of his salary.

Jora spent £3600 on living expenses.

Work out how much money he saved.



£

(Total for Question is 5 marks)

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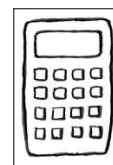
Q15.

A factory makes 1500 cans per minute.

The factory makes cans for 8 hours each day.

Each can is filled with 330 ml of cola.

How much cola is needed to fill all the cans that are made each day?
Give your answer in litres.



..... litres

(Total for Question is 4 marks)

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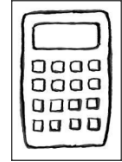


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Q16.

Brian makes egg cups.

He makes 12 egg cups per hour.



Brian makes egg cups for $4\frac{1}{2}$ hours each day, on 5 days of the week.

The egg cups are packed in boxes.

8 egg cups are packed into each box.

How many boxes are needed for all the egg cups Brian makes in 5 days?

(Total for Question is 4 marks)

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Q17.

*140 children will be at a school sports day.

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.

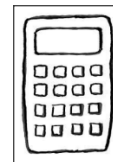
The orange drink is made from orange squash and water.

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)

**Q18.**

* Talil is going to make some concrete mix.

He needs to mix cement, sand and gravel in the ratio 1 : 3 : 5 by weight.

Talil wants to make 180 kg of concrete mix.

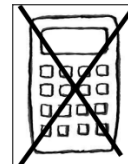
Talil has

15 kg of cement

85 kg of sand

100 kg of gravel

Does Talil have enough cement, sand and gravel to make the concrete mix?

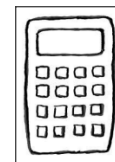
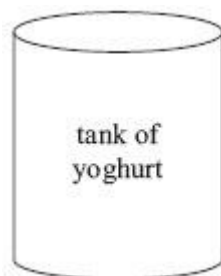


(Total for Question is 4 marks)



Q19.

* A factory makes yoghurt in a tank.



Here are the weights of the ingredients needed to make a tank full of yoghurt.

Milk	80 kg
Skimmed milk powder	2 kg
Sugar	3 kg
Stabiliser	1 kg
Fruit	10 kg

The yoghurt from the tank is put into pots.

Each 1 kg of the yoghurt is used to fill 8 pots.

Is there enough yoghurt in the tank to fill 750 pots?

You must show all your working.

(Total for Question is 4 marks)

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Money Calculations

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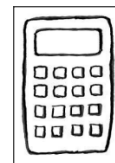
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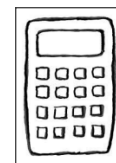


Q1. Jalin has a £10 note to spend on stickers.
A packet of stickers costs 79p.
He buys as many packets of stickers as possible.
Work out how much change Jalin should get.



.....(Total for Question is 3 marks)

Q2. A film starts at 17 50
The film ends at 19 30



(a) How long does the film last?

.....(2)

Jackie buys some tickets to see the film.

Each ticket costs £4.50

Jackie pays with two £20 notes.

Jackie gets £8.50 change.

(b) How many tickets did Jackie buy?

.....(3)(Total for Question is 5 marks)

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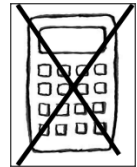
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Q3. Mr Brown and his 2 children are going to London by train.

An adult ticket costs £24

A child ticket costs £12

Mr Brown has a Family Railcard.



Family Railcard gives

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

60% off child tickets

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

£

(Total for Question is 4 marks)

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Q4.

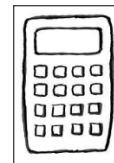
Petra booked a family holiday.

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)

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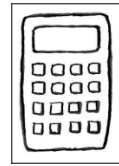
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Q5. * Jim's pay is £180 each week.

Jim asks his boss for an increase of £20 a week.

Jim's boss offers him a 10% increase.

Is the offer from Jim's boss more than Jim asked for?
You must show your working.

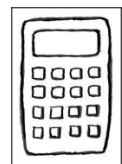


(Total for Question is 3 marks)

Q6.

£500 is invested at a simple interest rate of 3% per year.

After how many years is the total interest £60?



..... years

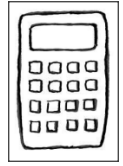
(Total for Question is 3 marks)



Q7.

A cooker costs £650 plus 20% VAT.

(a) Calculate the total cost of the cooker.



£
(3)

A washing machine has a price of £260

In a sale its price is reduced by £39

(b) Write the reduction as a percentage of the price.

..... %
(2)

3 kitchen chairs cost a total of £44.79

(c) Work out the total cost of 8 of these chairs.

£
(2)

(Total for Question is 7 marks)



EVALUATE REVIEW

Q8. Greg sells car insurance and home insurance.

The table shows the cost of these insurances.

Insurance	car insurance	home insurance
Cost	£200	£350

Each month Greg earns

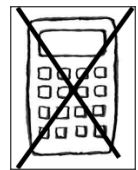
£530 basic pay

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)



Q9.* A company sells boxes to factories.

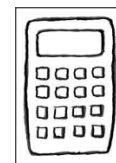
Fred buys boxes.

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.

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

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

You must show your working.

(Total for Question is 5 marks)

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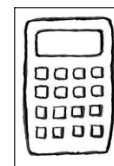


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Q10. Glen buys four tickets for a concert.
Each ticket costs £54

Glen also has to pay a booking fee.
The booking fee is 5% of the total price of the tickets.

Work out the total amount Glen has to pay.



£.....

(Total for Question is 3 marks)
Money Calculations



Q11.

Edwin goes to a restaurant with some friends.

Here are the meals they have

2 fish and chips at £9.25 each

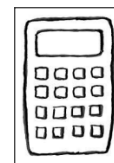
1 chicken and chips at £9.50

1 roast lamb at £10.55

4 puddings at £4.55 each.

Edwin pays for the meals with three £20 notes.

How much change should Edwin get?



£

(Total for Question is 3 marks)



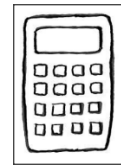
EVALUATE REVIEW

Q12.

* Beth is planning a trip for a group of 36 people.
The group can go to a theme park **or** to a concert.

If they go to the concert, they will go by train.
If they go to the theme park, they will go by coach.

Beth has information about the costs.



Theme Park Ticket Prices

£9 per person
or
£6.50 per person
in a group of 10 or more people

Coach Hire

24 seats £260
40 seats £320
54 seats £410

Concert Ticket Price

£7.50

Return Train Fares

£8.25 each
or
£26.50 for each group of 4 people

What is the least possible total cost of the trip?
You must show all your working.

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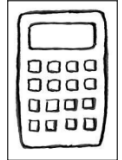
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(Total for Question is 5 marks)



Q13. Mrs Evans is planning a trip to the zoo.

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.

£

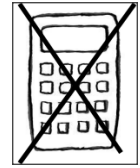
(Total for Question is 4 marks)



Q14.

A charity made an appeal for money.

The charity put the information shown below on a poster.



Hunger appeal

- £3 will buy 5 meals for one person.
- £100 will buy lunches for 80 school children for 5 days.

£3 will buy 5 meals for one person.

(a) Work out the cost of one of the meals.
Give your answer in pence.

.....p
(2)

£100 will buy lunches for 80 school children for 5 days.

(b) Work out the cost of buying lunch for one school child for one day.

.....
(3)

(Total for Question is 5 marks)



Q15.

Jenny is decorating her bedroom.

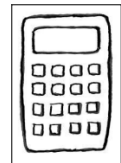


She buys three tins of paint.
One of the tins costs £13.68
The other two tins each cost £8.10
Jenny also buys a pack of paintbrushes.
The pack costs £6.99

Jenny gets $\frac{1}{3}$ off the total cost.

Jenny pays with two £20 notes.

How much change should Jenny get?



£.....

(Total for Question is 4 marks)



Q16.

Here is a plan of Martin's driveway.

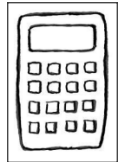
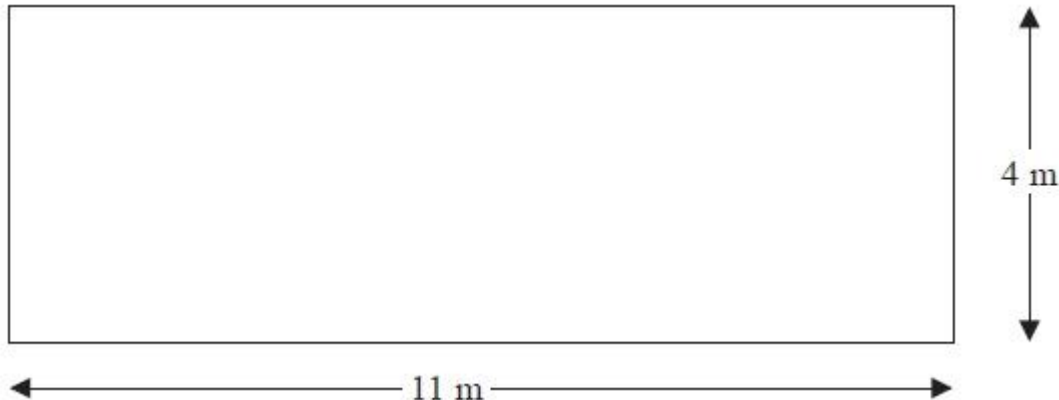


Diagram **NOT** accurately drawn

Martin is going to cover his driveway with gravel.
The gravel will be 6 cm deep.

Gravel is sold in bags.
There are 0.4 m^3 of gravel in each bag.
Each bag of gravel costs £38

Martin gets a discount of 30% off the cost of the gravel.

Work out the total amount of money Martin pays for the gravel.

£

(Total for Question is 5 marks)



Q17.

Last year, Jora spent

30% of his salary on rent

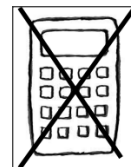
$\frac{2}{5}$ of his salary on entertainment

$\frac{1}{4}$ of his salary on living expenses.

He saved the rest of his salary.

Jora spent £3600 on living expenses.

Work out how much money he saved.



£

(Total for Question is 5 marks)

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Q18.

Sapir buys 60 bags.

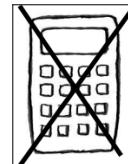
She pays £3 for each bag.

Sapir sells $\frac{1}{2}$ of the bags for £5 each.

She sells $\frac{1}{3}$ of the bags for £4 each.

Sapir wants to make a total profit of £75

How much should she sell each of the remaining bags for?



£.....

(Total for Question is 4 marks)

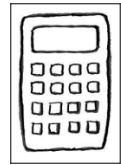


EVALUATE REVIEW

Q19. * Mr and Mrs Jennings are planning a holiday to Italy.

They will go on holiday with their 11 year old daughter.

The table below shows some information about the prices of flights.



Flight to Italy	%		Flight back from Italy
Date	Price per adult (£)	Date	Price per adult (£)
28th October	282	4th November	305
29th October	283	5th November	303
30th October	282	6th November	285
31st October	272	7th November	283
Child fares	0 to 2 years old		No charge Over 2 to 12 years old
	75% of the adult fare		

Mr and Mrs Jennings and their daughter want to fly to Italy on 29th October.

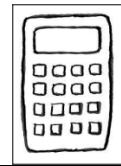
They want to fly back from Italy on 6th November.

They have £1600 to spend on flights.

Do they have enough money for the flights?

You must show all your working.

(Total for Question is 6 marks)



Q20. * Zara is the manager of a shop.

The table gives information about the expenses the shop had last year.

Expense	Wages	Rent	Goods	Other expenses
Amount	£92 000	£10 800	£72 000	£7000

This year

the wages will increase by 7.5%,
the rent will be $\frac{7}{10}$ of the rent last year,
the other expenses will halve.

Zara wants to increase the amount of money she spends on goods.

She also wants the total expenses the shop has this year to be the same as last year.

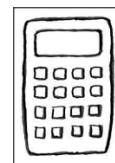
Can Zara increase the amount of money she spends on goods?

(Total for Question is 4 marks)



Q21.

The diagram shows the cost of a bag of soil and the cost of a box of seeds.



Kate buys two bags of soil and three boxes of seeds.

She gets $\frac{1}{4}$ off the total cost.

Kate pays with a £20 note.

How much change should Kate get?

£

(Total for Question is 4 marks)

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Q22.



Mr Watkins needs to buy some oil for his central heating.

Mr Watkins can put up to 1500 litres of oil in his oil tank.

There are already 850 litres of oil in the tank.

Mr Watkins is going to fill the tank with oil.

The price of oil is 67.2p per litre.

Mr Watkins gets 5% off the price of the oil.

How much does Mr Watkins pay for the oil he needs to buy?

.....
(Total for Question is 5 marks)

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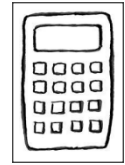
EVALUATE

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Q23.* Cheryl is selling books and magazines to raise money for charity.
She wants to raise a total of £50



Cheryl sells 46 hardback books for 50p each.

She sells 68 paperback books for 30p each.

She sells magazines for 20p each.

Cheryl has 26 magazines to sell.

Work out if she has enough magazines to sell to reach her £50 target.

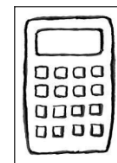
(Total for Question is 5 marks)



Q24.

The table shows the prices of drinks at Ed's Cafe.

Ed's Cafe			
	Small	Regular	Large
Black coffee	£1.40	£1.80	£2.20
Cappuccino	£1.60	£2.10	£2.60
Latte	£1.60	£2.10	£2.60
Tea	£1.20	£1.50	£1.80
Cola	£1.50	£2.00	£2.40



Helen buys

2 small black coffees

1 regular cappuccino

1 large cola

Helen pays with a £10 note.

(a) Work out how much change Helen should get.

.....

(3)

Ed reduces all the prices by 15%.

(b) Work out the reduced price of a large latte.

.....

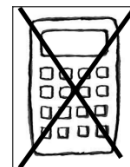
(3)

(Total for Question is 6 marks)



Q25.

* The normal price of a denim shirt at a shop is £9.60

On Special Offer Day, there is $\frac{1}{3}$ off the normal price.

Billy has £13

Has he enough money to buy two denim shirts on Special Offer Day?

You must show all your working.

(Total for Question is 4 marks)



Q26.

Greg sells car insurance and home insurance.

The table shows the cost of these insurances.

Insurance	car insurance	home insurance
Cost	£200	£350

Each month Greg earns

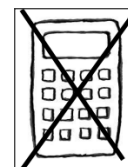
£530 basic pay

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)

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Q27.

Sarah wants a music magazine each month for a year.

She can

pay £3.50 each month

or

pay £37.20 for the year.

Sarah pays £37.20 for the year.

How much cheaper is this than paying £3.50 each month?

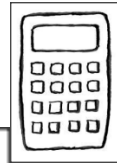


£

(Total for Question is 3 marks)



Q28.



Here is part of Jo's electricity bill.

Electricity Bill

J. Evans
3 Hillside Ave
London

May 2012



CP Energy
Connecting people
Connecting places

2012

Reading 1st Jan	02792 units
Reading 1st April	03307 units

Number of units used	515 units
----------------------	-----------

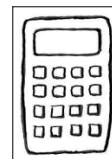
Cost: 35p per unit

Work out how much Jo has to pay for the units she has used.

(Total for Question is 4 marks)



Q29.



Here is part of Mr. Jones' electricity bill.

Electricity Bill					
Mr A. Jones 23 The Street Lavenham CO 10 1XY			Seelec Electricity for the South East		
Date of meter reading	Reading in units				
Jan. 31st 2011	2	5	1	9	2
April 31st 2011	2	7	0	6	5

Cost per unit

11.45p

Find the total cost for Mr Jones' electricity bill.

(Total for Question is 3 marks)

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Value for

Money

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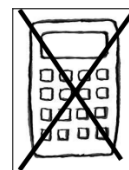
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Questions

Q1.

*Milk is sold in two sizes of bottle.



A 4 pint bottle of milk costs £1.18

A 6 pint bottle of milk costs £1.74

Which bottle of milk is the best value for money?

You must show all your working.

(Total for Question is 3 marks)



Q2.

The same type of computer is sold in two shops.

Computer World

Beta computer

Normal price : £359

15% off normal price

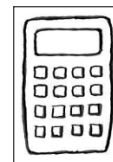
Logic

Beta computer

Pay £110 now
and pay 12 instalments
of £16.80 per month

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

You must show all your working.



£

(Total for Question is 5 marks)

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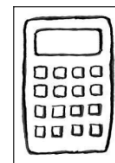
Q3.

* Plants are sold in three different sizes of tray.

A small tray of 30 plants costs £6.50

A medium tray of 40 plants costs £8.95

A large tray of 50 plants costs £10.99



Kaz wants to buy the tray of plants that is the best value for money.

Which size tray of plants should she buy?

You must show all your working.

(Total for Question is 4 marks)

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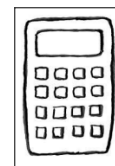
Q4.

* 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? You must show your working.



(Total for Question is 5 marks)

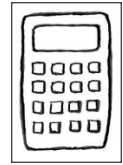


Q5.

* The Kumar family are going to go to New York.

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?

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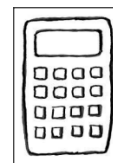
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(Total for Question is 5 marks)



Q6. * Gordon owns a shop.

Here are the prices of three items in Gordon's shop and in a Supermarket.



Gordon's Shop	
400 g loaf of bread	£1.22
1 litre of milk	£0.96
40 tea bags	£2.42

Supermarket	
400 g loaf of bread	£1.15
1 litre of milk	£0.86
40 tea bags	£2.28

Gordon reduces his prices by 5%.

Will the total cost of these three items be cheaper in Gordon's shop than in the Supermarket?

(Total for Question is 3 marks)

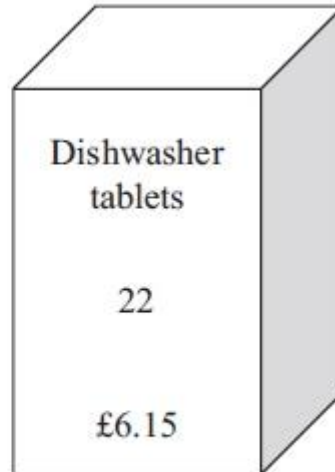


Q7.

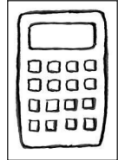
Dishwasher tablets are sold in two sizes of box.



Small box



Large box



A small box contains 15 tablets and costs £3.95

A large box contains 22 tablets and costs £6.15

- * (a) Which size of box gives the better value for money?
You must show all your working.

(4)

The weight of the large box is 357 grams, to the nearest gram.

(b) (i) What is the minimum possible weight of the box?

..... grams

(ii) What is the maximum possible weight of the box?

..... grams

(2)

(Total for Question is 6 marks)



Q8.

* Sam is going to paint his garden shed.

The paint is sold in two different shops.


Paint For You



2.5 litres

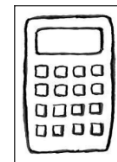
£8.35 plus VAT at 20%

Paul's Paints



0.75 litres

£3.15



Sam needs **7.5 litres** of paint.

Sam wants to buy the cheapest paint.

He is going to buy the paint from one of these shops.

Which shop should he buy the paint from?

You must show your working.

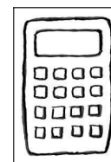
(Total for Question is 4 marks)



Q9.

* Ashley wants to buy some tins of paint.

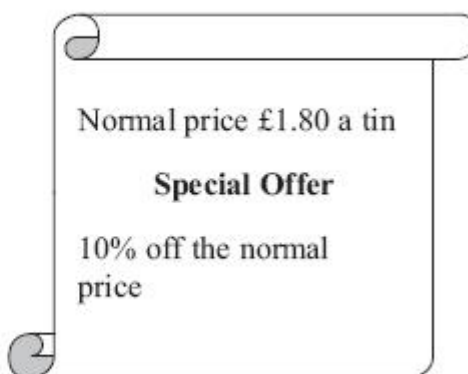
He finds out the costs of paint at two shops.



Paint R Us



Deco Mart



Ashley needs 9 tins of paint.

Ashley wants to get all the tins of paint from the same shop.

He wants to pay the cheapest possible total price.

Which of the two shops should Ashley buy the paint from?

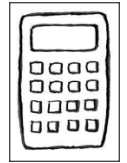
(Total for Question is 6 marks)



EVALUATE REVIEW

Q10.

* Joan is planning a skiing holiday in Hinterglemm for herself and her two children.
They are going skiing for 6 days.



The table shows the costs of ski hire, of boot hire and of buying lift passes in two shops in Hinterglemm.
All prices are in Euros.

Shop A

		Ski hire	Boot hire	Lift pass
Adult	6 days	111	53	236
	13 days	168	90	314
Child	6 days	78	52	165
	13 days	122	87	210

Shop B

		Ski hire	Boot hire	Lift pass
Adult	6 days	108	54	242
	13 days	170	89	324
Child	6 days	68	48	160
	13 days	118	85	205

Joan will use her own skis and her own boots.

For 6 days she will need

and

to hire skis for each of her
two children
to hire boots for each of her
two children
to buy lift passes for herself
and each of her two children.

Shop A gives 5% off the total cost.

Shop B gives 3% off the total cost.

Joan wants to hire the skis and boots and buy the lift passes from the same shop.
She wants to get everything from the cheaper shop.

Which shop is cheaper for Joan?
You must show all your working.

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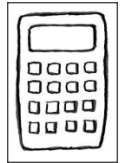


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(Total for Question is 5 marks)



Q11. * Debra and Mark are planning to go on a cruise.
They can travel with one of two companies, Caribbean Calypso or Royal European.
The table shows the cost per person to travel with each company.



		Type of cabin			
		Inside	Outside	Balcony	Suite
Cost per person	Caribbean Calypso	£1136	£1319	£1529	£2329
	Royal European	£1043	£1263	£1484	£2147

Caribbean Calypso has a discount of 10% if you book online.
Royal European has a discount of 5% if you book online.

Debra and Mark are going to book a suite for their cruise.
They are going to book online.

Debra and Mark want to pay the lowest possible cost.
Which company should they choose?
You must show all your working.

(Total for Question is 5 marks)



Q12.

* Here are two schemes for investing £2500 for 3 years.

Scheme A

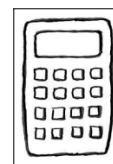
gives £5.35 interest each month.

Scheme B

gives 3% simple interest each year.

Which scheme gives the most total interest over the 3 year period?

You must show all your working.

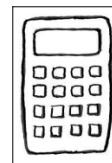


(Total for Question is 4 marks)




Q13.

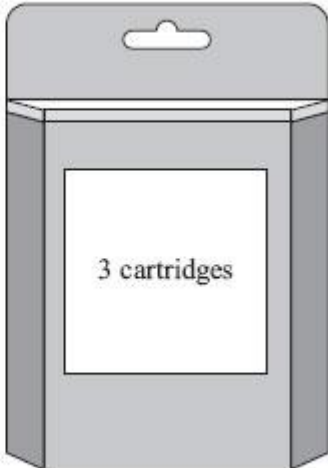
George is going to buy exactly 10 ink cartridges.



Ink Cartridges



£9.39 per cartridge



£24.30 for a pack of 3 cartridges

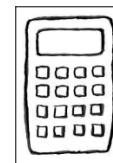
Find the difference in cost between the cheapest way and the most expensive way to buy the 10 ink cartridges.

.....
(Total for Question is 5 marks)



Q14.

* Here are two different ways to invest £2500



Investment A

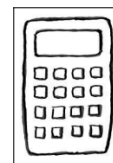
Invest £2500 for 3 years
and get £5 interest each month.

Investment B

Invest £2500 for 3 years
at 2.5% simple interest each year.

Which investment gives the most interest?

(Total for Question is 4 marks)



Q15.

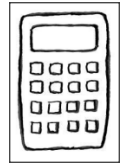
*The table shows information about the cost of hiring a cement mixer from two companies.

Cost of hiring cement mixer			
Company	First day	Each extra day	Delivery and collection
Quick Mix	£13.50	£6.90	Free
Speedy Hire	£7.20	£7.20	£5.90

Chris wants to hire a cement mixer for 5 days.
He will hire the cement mixer from either Quick Mix or Speedy Hire.
Chris wants to pay the least amount of money.

Which company should he choose?
You must show all your working.

(Total for Question is 4 marks)



Q16.

Robert and his family are going on holiday to France.

A bank gives Robert this chart to help him to change between pounds (£) and euros (€).

pounds (£)		euros (€)
1	=	1.2
2	=	2.4
5	=	6.0
10	=	12.0
20	=	24.0
50	=	60.0
100	=	120.0

Robert changes £600 into euros (€).

(a) How many euros should Robert get?

.....

(2)

In France, a laptop costs €540

In England, the same laptop costs £460

(b) Work out the difference between the cost of the laptop in France and the cost of the laptop in England.

You must show clearly how you got your answer.

.....

(3)

(Total for Question is 5 marks)

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Area, Perimeter and Volume

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EVALUATE REVIEW

Q1.

Fran is decorating her bedroom.
She is going to put a border all around the bedroom.

This diagram shows a plan of the bedroom.

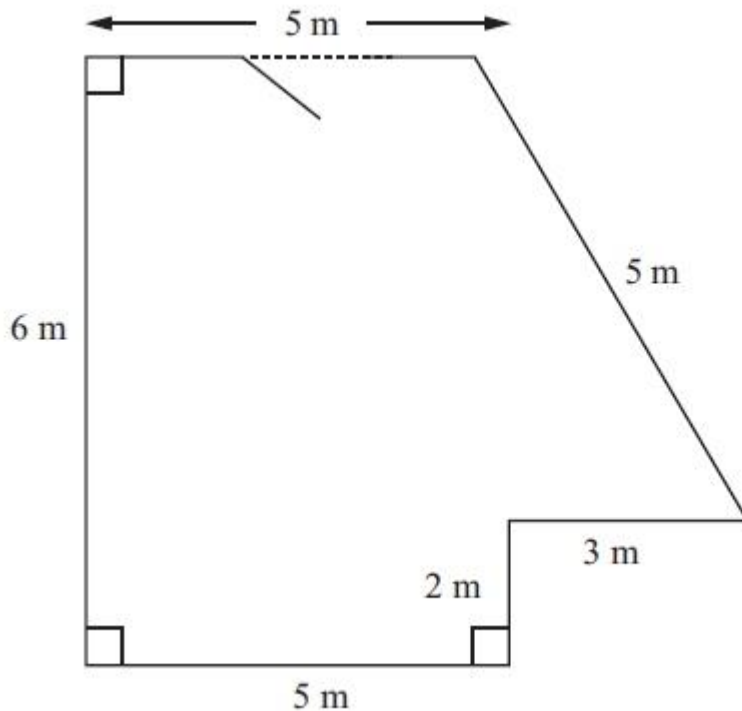
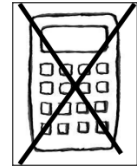


Diagram **NOT**
accurately drawn



Border rolls are sold in 4 m lengths.
Work out the number of border rolls Fran will need to buy.

.....

(Total for Question is 4 marks)



Q2.* The diagram shows the plan of the floor of Mrs Phillips' living room.

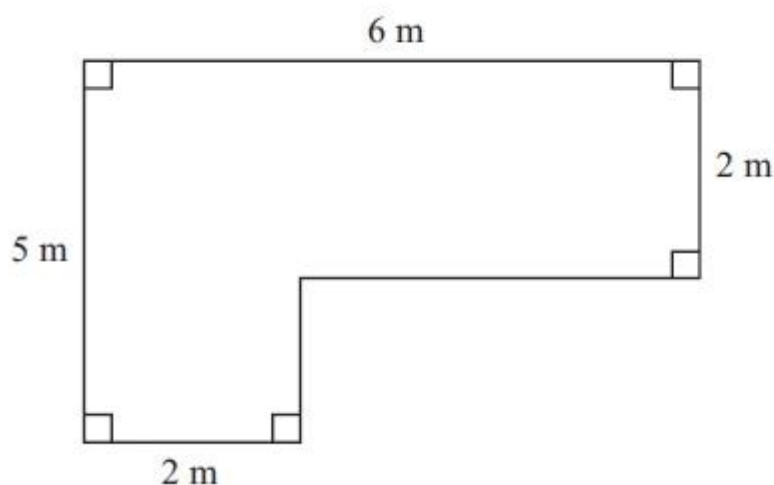
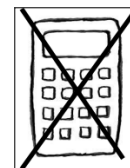


Diagram **NOT**
accurately drawn



Mrs Phillips is going to cover the floor with floor boards.
One pack of floor boards will cover 2.5 m^2 .

How many packs of floor boards does she need?
You must show your working.

(Total for Question is 4 marks)



Q3. Dilys buys a new house.

She wants to have a lawn in the back garden.

The lawn is going to be in the shape of a rectangle.

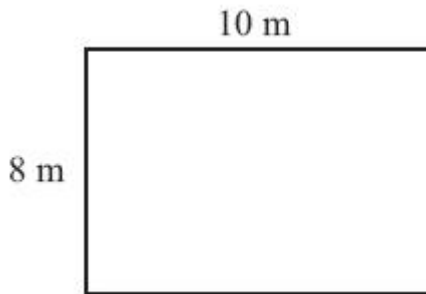
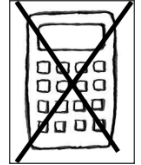


Diagram **NOT**
accurately drawn

Edging strip

£1.50 per metre



The lawn will have a length of 10 m.

The lawn will have a width of 8 m.

Dilys wants to buy edging strip for her lawn.

The length of the edging strip needs to be equal to the perimeter of her lawn.

Edging strip costs £1.50 per metre.

What is the total cost of the edging strip?

£

(Total for Question is 4 marks)



Q4. Here is a diagram of Jim's garden.

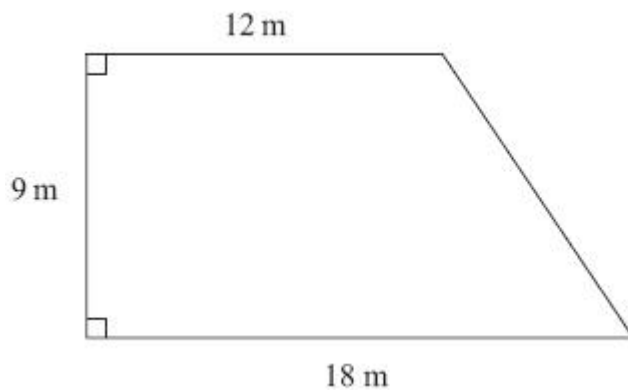
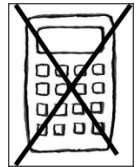


Diagram **NOT**
accurately drawn



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 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)



Q5. * Marc drives a truck.
The truck pulls a container.
The container is a cuboid 10 m by 4 m by 5 m.

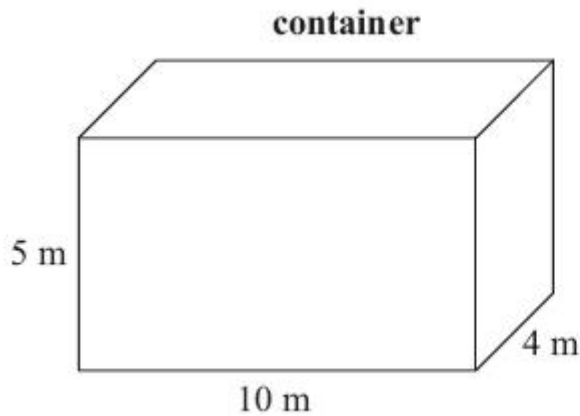
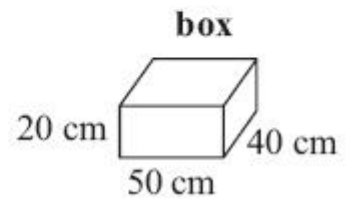
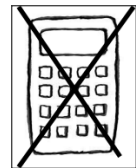


Diagram **NOT**
accurately drawn



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

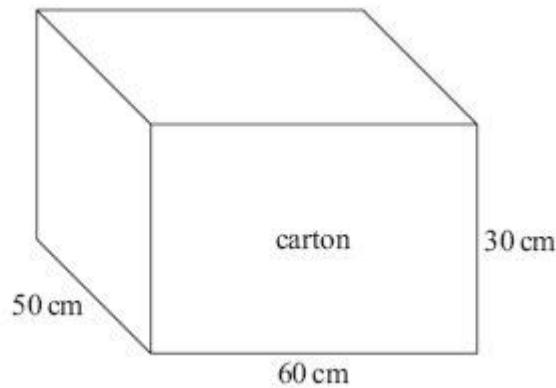
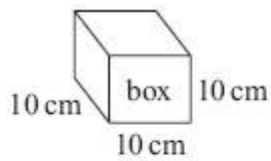
Show that Marc can put no more than 5000 boxes into the container.



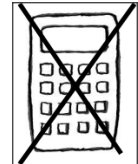
(Total for Question is 4 marks)



Q6. Terry fills a carton with boxes.



Diagrams **NOT**
accurately drawn



Each box is a cube of side 10 cm.

The carton is a cuboid with

length	60 cm
width	50 cm
height	30 cm

Work out the number of boxes Terry needs to fill one carton completely.

.....
(Total for Question is 3 marks)



Q7.* The diagram shows the floor plan of Jill's dining room.

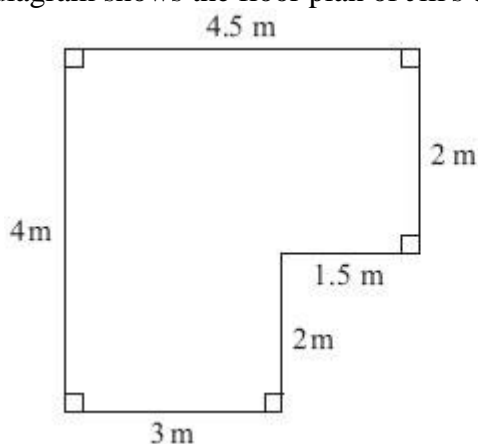
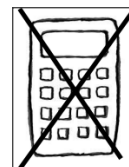


Diagram **NOT**
accurately drawn



Jill is going to cover the floor with wooden floorboards.

The floorboards are sold in packs.

One pack of floorboards will cover 2.25 m^2 .

Work out how many packs Jill needs.

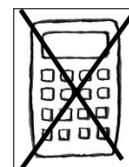
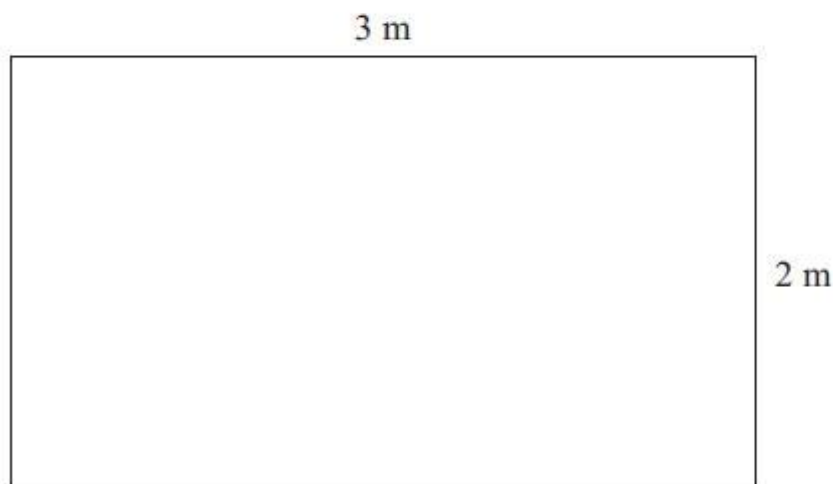
You must show all your working.

(Total for Question is 4 marks)



Q8. Here is a diagram of part of a wall in Sarah's house.

Diagram **NOT**
accurately drawn



Sarah is going to cover this part of the wall with square tiles.
The square tiles have sides of 20 cm.

Work out the number of tiles Sarah needs.

.....

(Total for Question is 3 marks)



Q9.

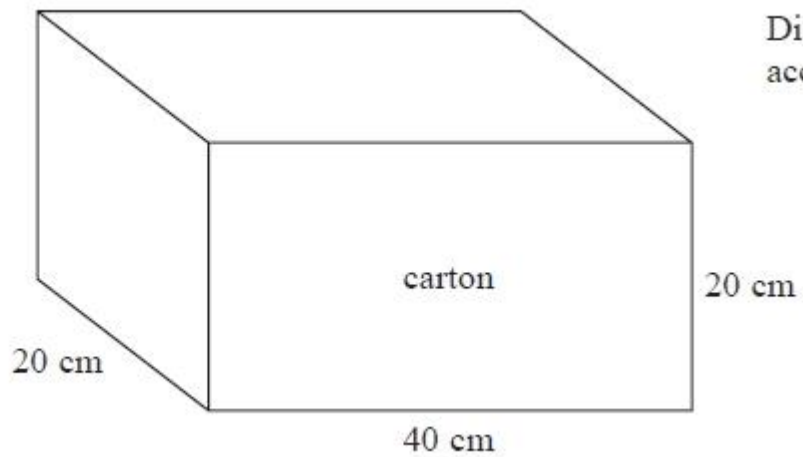
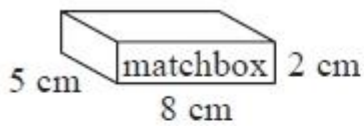
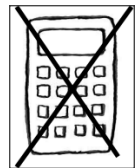


Diagram **NOT**
accurately drawn

A matchbox is 5 cm by 8 cm by 2 cm.
A carton is 20 cm by 40 cm by 20 cm.

The carton is completely filled with matchboxes.

Work out the number of matchboxes in the carton.



.....
(Total for Question is 3 marks)



Q10. Ali has some packets.

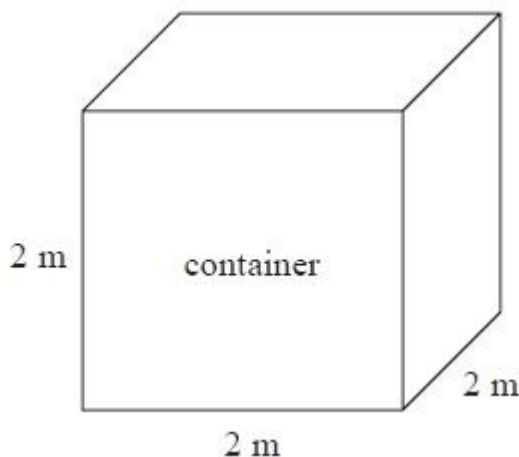
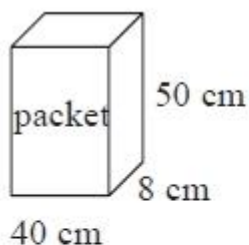


Diagram **NOT**
accurately drawn

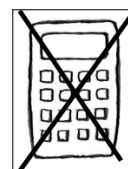
Each packet has dimensions 40 cm by 8 cm by 50 cm.

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)



Q11. The diagram shows a garden with 4 flower beds.
The garden is a rectangle, 23 m by 17 m.

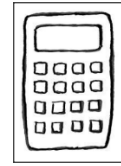
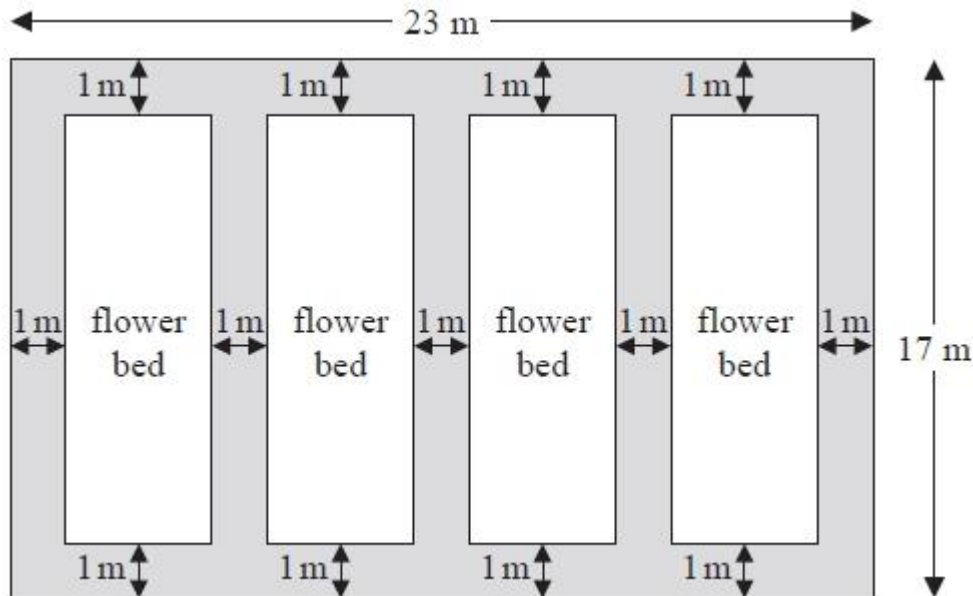


Diagram **NOT** accurately drawn

Each flower bed is a rectangle with the same length and the same width.

Work out the length and the width of a flower bed.

length =m

width =m

(Total for Question is 3 marks)



Q12. Here is a diagram of a small field.

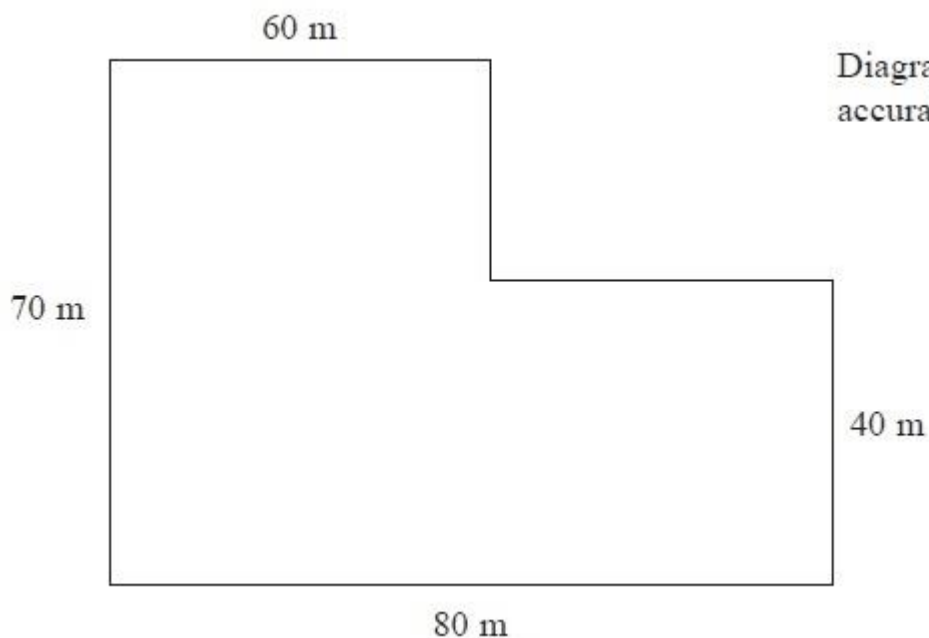
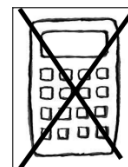


Diagram NOT
accurately drawn



All the corners are right angles.

90% of the field is going to be used to grow wheat.

Work out the area of the field that is going to be used to grow wheat.

..... m²

(Total for Question is 5 marks)



Q13.*The diagram shows the plan of a small field.

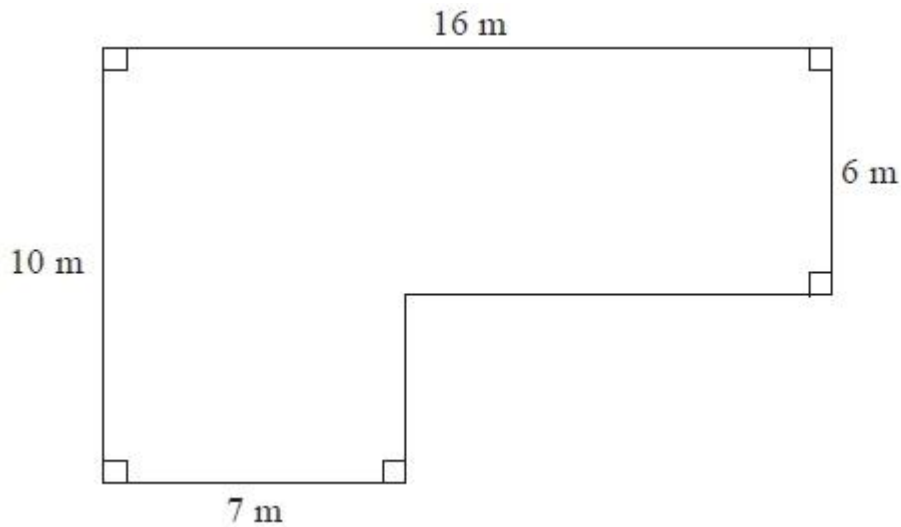
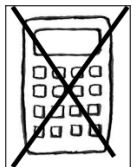


Diagram **NOT**
accurately drawn



Kevin is going to keep some pigs in the field.
Each pig needs an area of 36 square metres.

Work out the greatest number of pigs Kevin can keep in the field.

(Total for Question is 4 marks)



Q14. * The diagram shows the floor of a village hall.

The caretaker
needs to polish the
floor.

One tin of polish
normally costs
£19

One tin of polish
covers 12 m^2 of
floor.

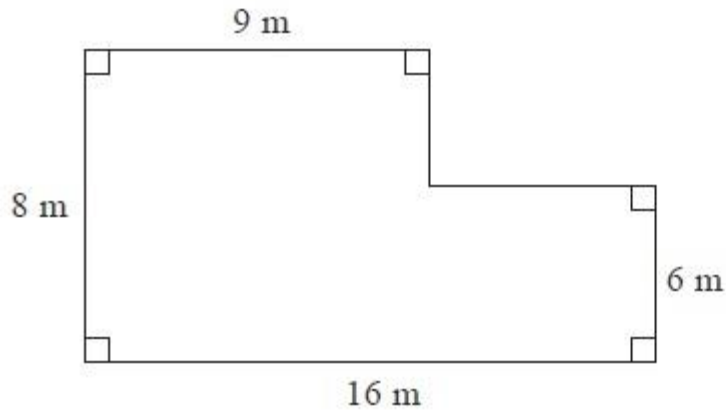
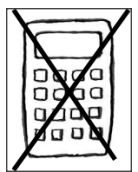


Diagram NOT
accurately drawn



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.

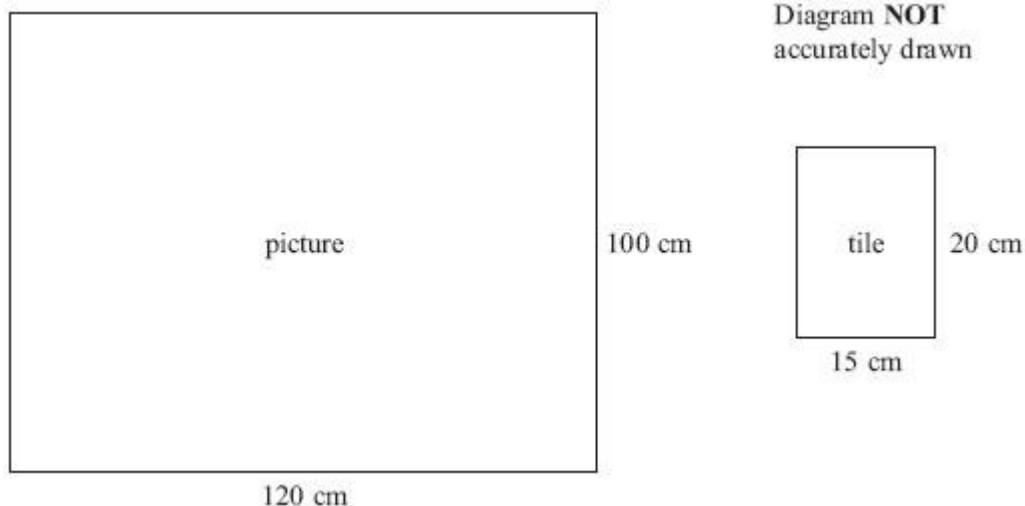
(Total for Question is 5 marks)



Q15. A picture is made from tiles.

The diagram shows the picture in the shape of a rectangle, 120 cm by 100 cm.

It also shows a tile in the shape of a rectangle, 15 cm by 20 cm.



(a) Work out the number of these tiles needed to make the picture.

.....

(3)

The total cost of the tiles is £52 plus VAT.

The rate of VAT is 20%.

(b) Work out 20% of £52

.....

(2)

(Total for Question is 5 marks)



Q16. The diagram shows a container used to store oil.

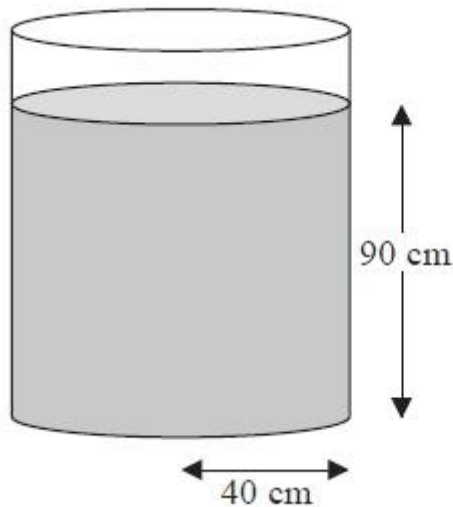
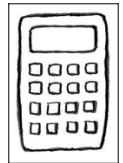


Diagram NOT
accurately drawn



The container is in the shape of a cylinder of radius 40 cm.

The height of the oil in the container is 90 cm.

65 litres of oil are taken from the container.

1 litre = 1000 cm³.

Work out the new height of the oil in the container.

Give your answer correct to one decimal place.

.....cm

(Total for Question is 4 marks)



EVALUATE REVIEW

Q17. The diagram shows a garden in the shape of a rectangle.

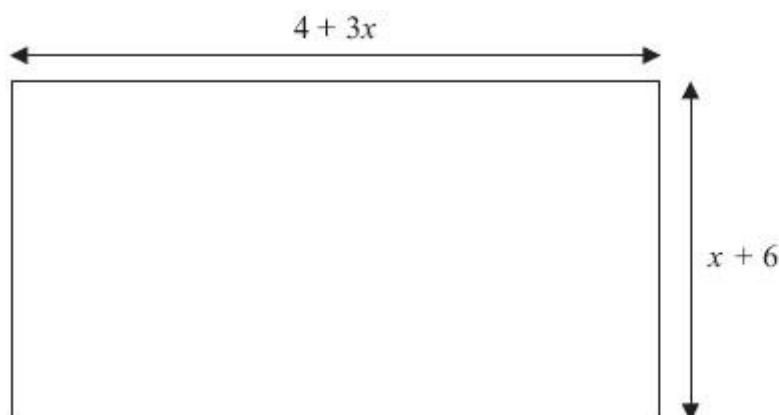
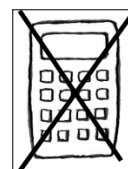


Diagram **NOT**
accurately drawn

All measurements are in metres.
The perimeter of the garden is 32 metres.

Work out the value of x



.....
(Total for Question is 4 marks)

Q18.*

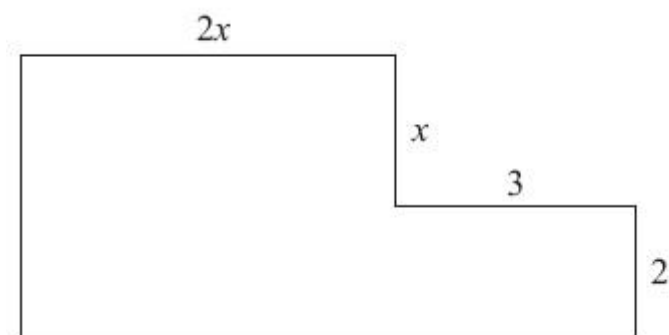
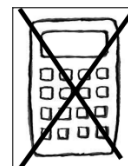


Diagram **NOT**
accurately drawn



In the diagram, all measurements are given in centimetres.
All angles are right angles.

Show that the perimeter of the shape can be written as $2(3x + 5)$.

(Total for Question is 4 marks)

Q19.

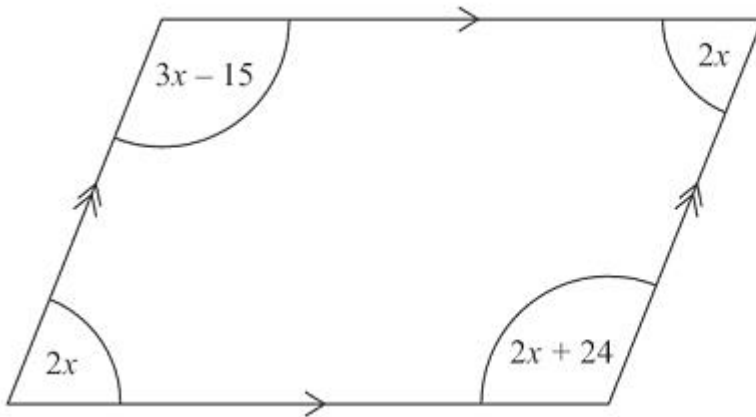
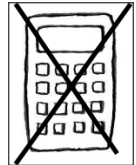


Diagram **NOT**
accurately drawn



The diagram shows a parallelogram.
The sizes of the angles, in degrees, are

$$2x$$

$$3x - 15$$

$$2x$$

$$2x + 24$$

Work out the value of x .

$$x = \dots\dots\dots$$

(Total for Question is 3 marks)



Q20.

The diagram shows a trapezium.

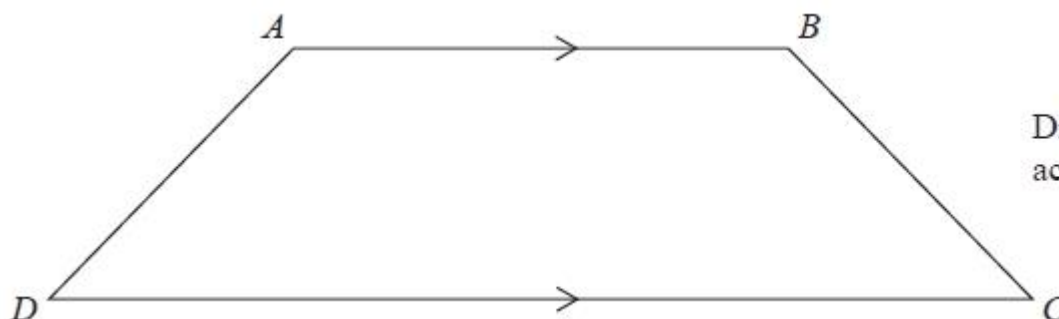


Diagram NOT
accurately drawn

$AD = x$ cm.

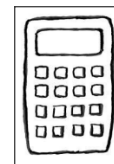
BC is the same length as AD .

AB is twice the length of AD .

DC is 4 cm longer than AB .

The perimeter of the trapezium is 38 cm.

Work out the length of AD .



..... cm

(Total for Question is 4 marks)

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Angle Questions

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Q1.*

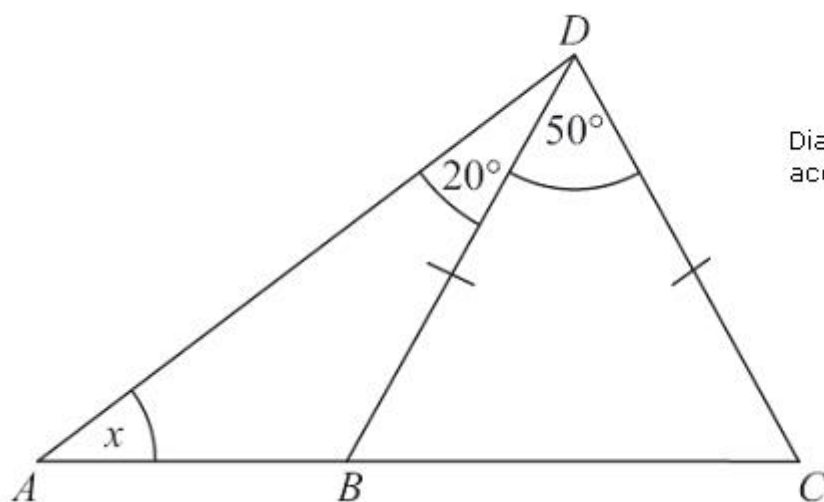
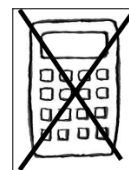


Diagram **NOT**
accurately drawn



ABC is a straight line.

$BD = CD$.

Angle $BDC = 50^\circ$.

Angle $ADB = 20^\circ$.

Work out the size of the angle marked x .

Give reasons for your answer.

(Total for Question is 4 marks)



Q2.

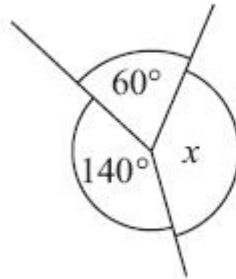
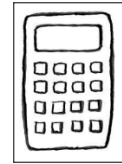


Diagram **NOT**
accurately drawn



(i) Work out the size of angle x .

.....°

(ii) Give a reason for your answer.

.....

.....

(Total for Question is 2 marks)

Q3.*

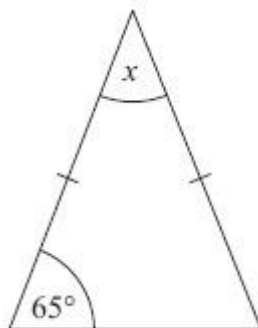
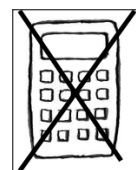


Diagram **NOT**
accurately drawn



Work out the size of the angle marked x .
Give reasons for your answer.

(Total for Question is 3 marks)



Q4.

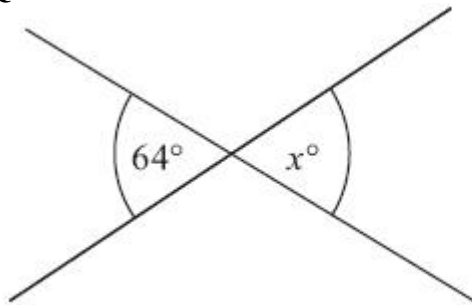
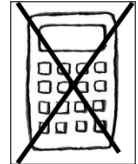


Diagram **NOT**
accurately drawn



(i) Find the value of x .

$x = \dots\dots\dots$

(ii) Give a reason for your answer.

.....

(Total for Question is 2 marks)

Q5.*

Work out the value of y .
Give reasons for your answer.

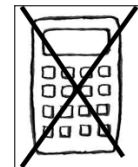
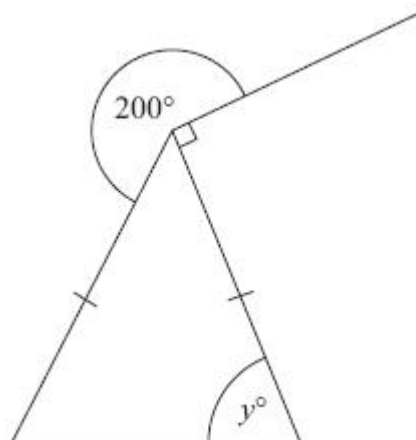


Diagram **NOT**
accurately drawn

(Total for Question is 4 marks)



Q6.*

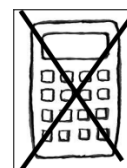
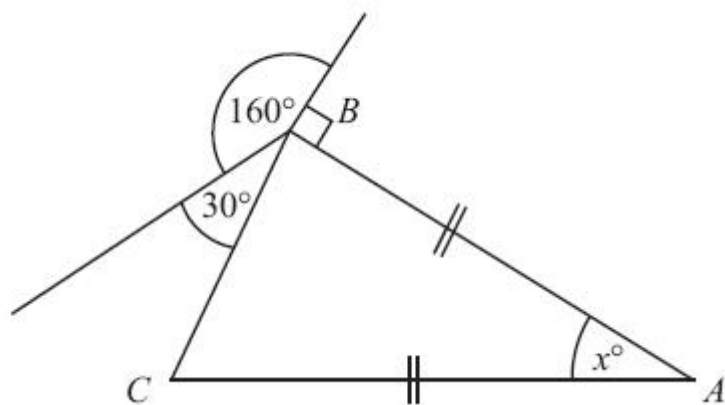


Diagram NOT

accurately drawn

ABC is an isosceles triangle.

Work out the size of the angle marked x° .
Give reasons for your answer.

(Total for Question is 5 marks)



Q7.*

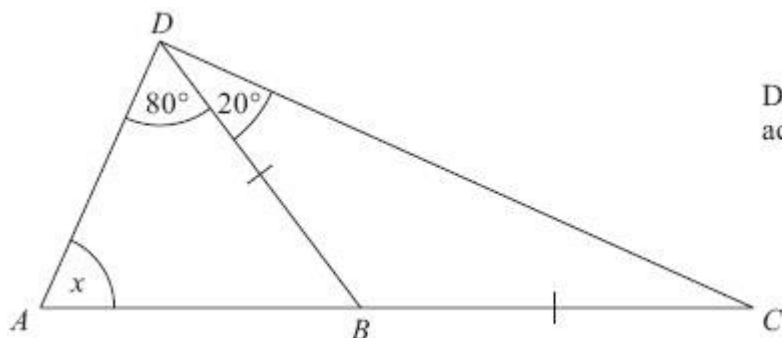
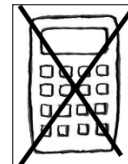


Diagram **NOT**
accurately drawn



ABC is a straight line.

$BD = BC$

Angle $ADB = 80^\circ$

Angle $BDC = 20^\circ$

Work out the size of the angle marked x .

Give reasons for your answer.

(Total for Question is 4 marks)



Q8.

*

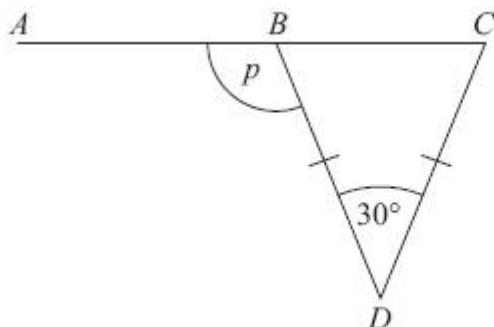
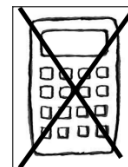


Diagram **NOT**
accurately drawn



ABC is a straight line.

$BD = CD$.

Angle $BDC = 30^\circ$.

Work out the size of the angle marked p .

You must give reasons for your answer.

(Total for Question is 4 marks)



Q9.

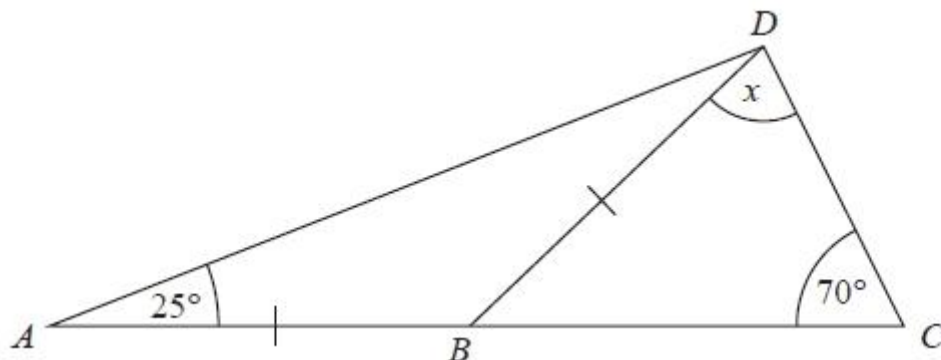


Diagram NOT
accurately drawn

ABC is a straight line.

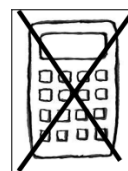
$AB = BD$

Angle $BAD = 25^\circ$

Angle $BCD = 70^\circ$

Work out the size of the angle marked x .

Give reasons for your answer



(Total for Question is 4 marks)



Q10.

Here is an isosceles triangle.

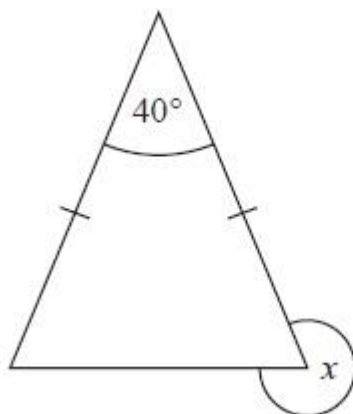
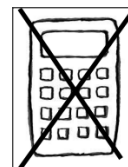


Diagram **NOT**
accurately drawn



Work out the size of the angle marked x .

.....^o

(Total for Question is 3 marks)



Q11.

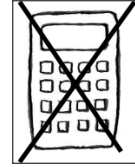
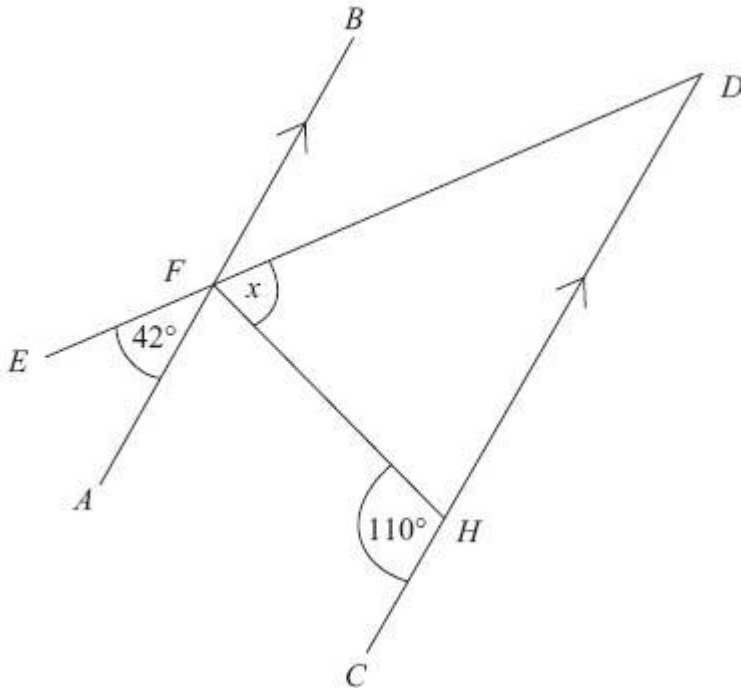


Diagram **NOT**

accurately drawn

AFB and CHD are parallel lines.

EFD is a straight line.

Work out the size of the angle marked x .

$x = \dots\dots\dots^\circ$

(Total for Question is 3 marks)



Q12.

*

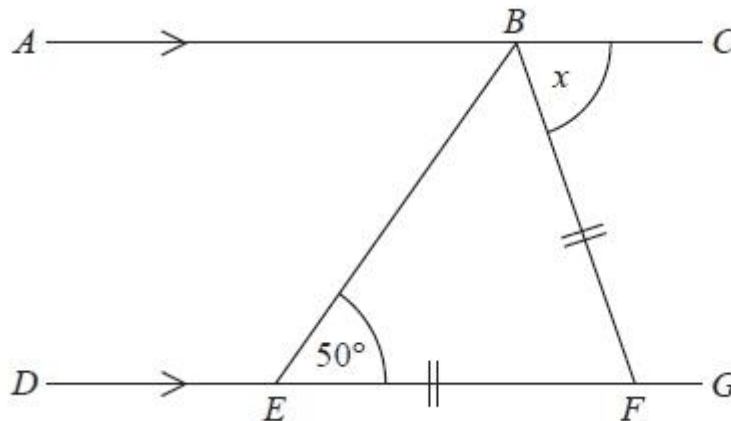


Diagram NOT
accurately drawn

ABC is a straight line.
 $DEFG$ is a straight line.
 AC is parallel to DG .
 $EF = BF$.
Angle $BEF = 50^\circ$.

Work out the size of the angle marked x .
Give reasons for your answer.



(Total for Question is 4 marks)



Q13.*

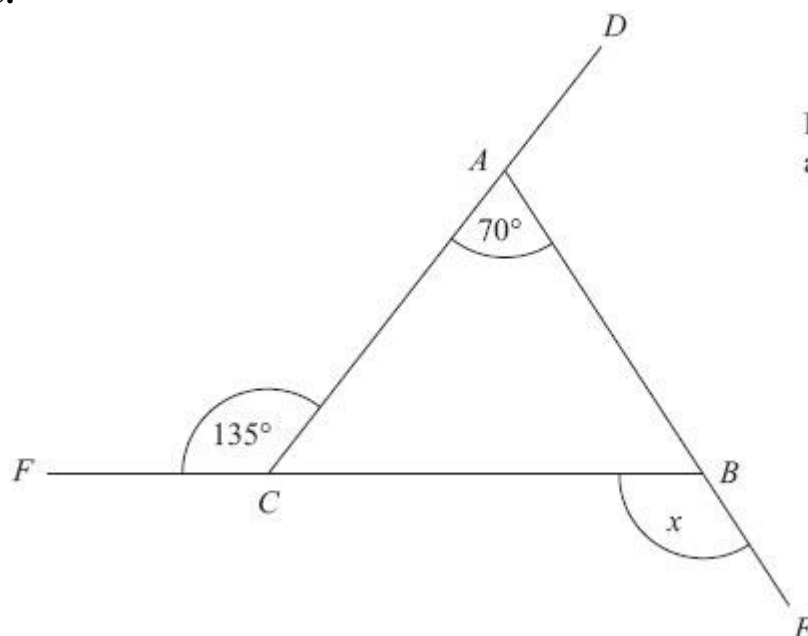
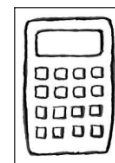


Diagram **NOT**
accurately drawn



DAC , FCB and ABE are straight lines.

Work out the size of the angle marked x .
You must give reasons for your answer.

(Total for Question is 5 marks)



Q14. The diagram shows two regular shapes.

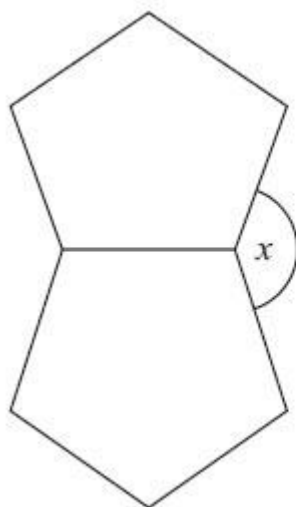
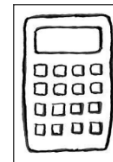


Diagram **NOT**
accurately drawn



Work out the size of the angle marked x .

.....

(Total for Question is 3 marks)



Q15.

The diagram shows a pattern using four identical rhombuses.

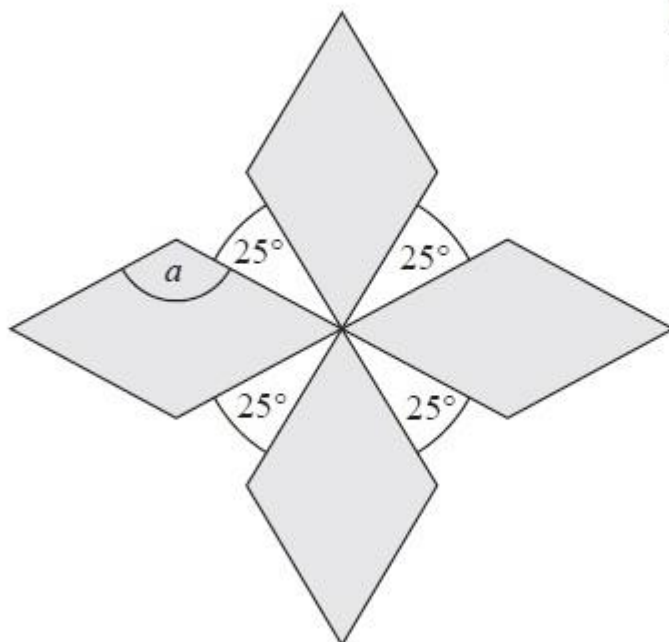
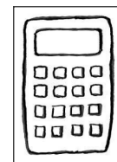


Diagram **NOT**
accurately drawn



Work out the size of the angle marked a .

You must show your working.

.....°

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REVIEW

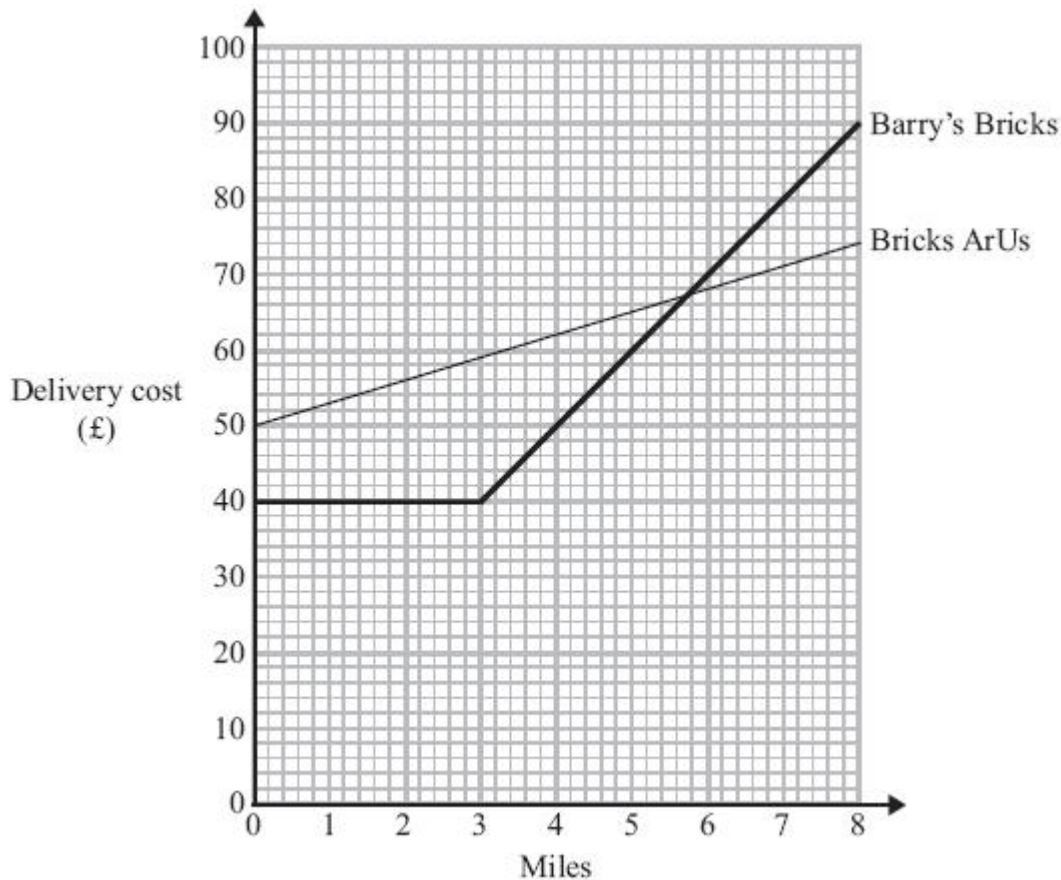
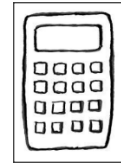


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EVALUATE REVIEW

Q1. Two companies, Barry's Bricks and Bricks ArUs, deliver bricks.
The graph shows the delivery costs of bricks from both companies.



Prakash wants Bricks ArUs to deliver some bricks.
He lives 2 miles away from Bricks ArUs.

(a) Write down the delivery cost.

.....

(1)

John needs to have some bricks delivered.
He lives 4 miles from Barry's Bricks.
He lives 5 miles from Bricks ArUs.

(b) Work out the difference between the two delivery costs.

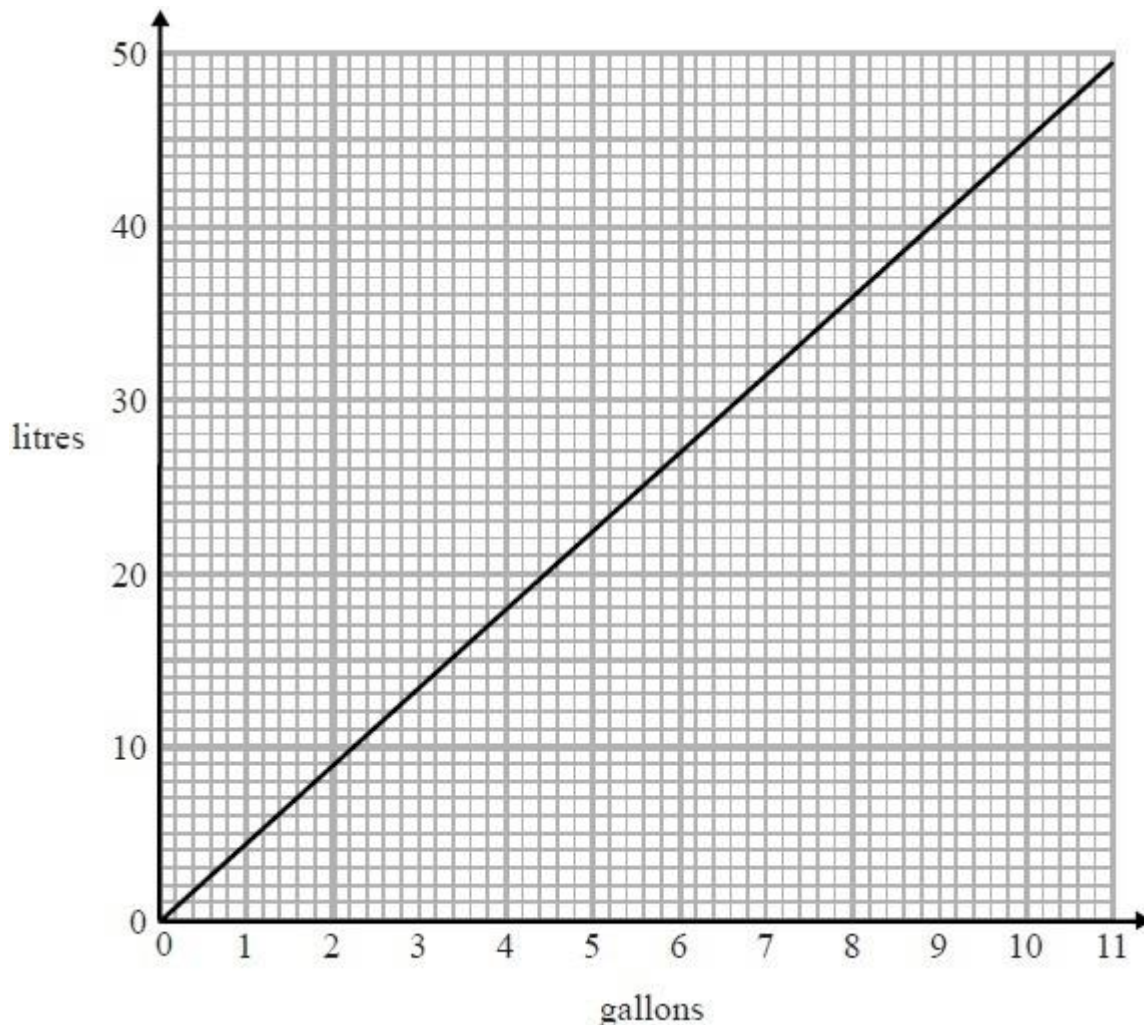
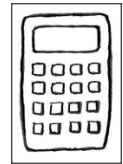
.....

(3)

(Total for Question is 4 marks)



Q2. You can use this graph to change between gallons and litres.



There are 80 litres of petrol in the petrol tank of car A.

There are 16 gallons of petrol in the petrol tank of car B.

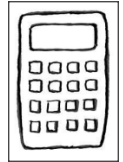
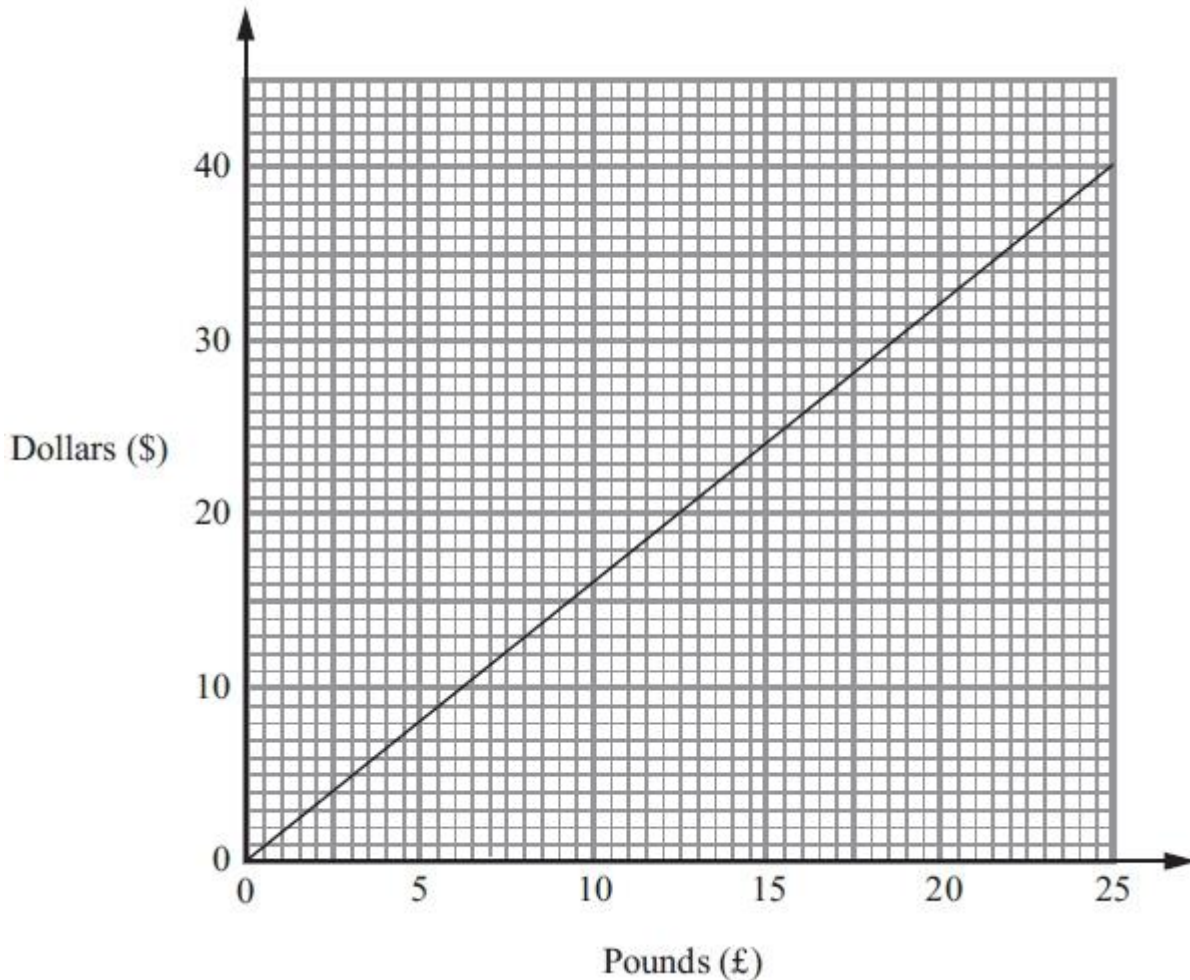
Which car has the most petrol in its petrol tank?

You must show all your working.

.....(Total for Question is 3 marks)



Q3.* You can use this conversion graph to change between pounds (£) and dollars (\$).



Stacey bought a watch in New York.
The watch cost \$220.

In London, the same type of watch costs £140.

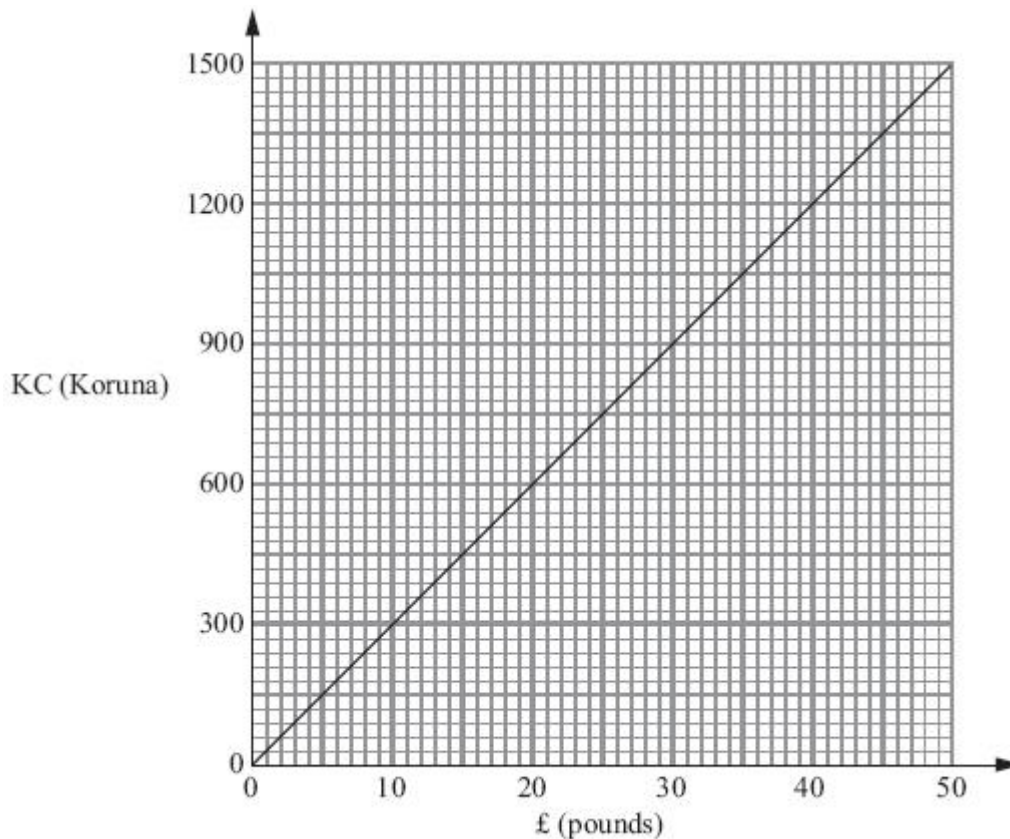
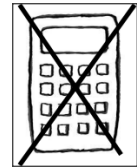
Compare the cost of the watch in New York with the cost of the watch in London.

(Total for Question is 4 marks)



Q4.* Barbara goes on holiday to Prague. The currency in Prague is the Koruna (KC).

This graph can be used to convert between £ (pounds) and KC (Koruna).
The exchange rate is £1 = 30 KC.



Barbara bought some things in London.
She saw the same things on sale in Prague.

The table shows the cost in £ (pounds) and the cost in KC (Koruna).

	Cost in London £ (pounds)	Cost in Prague KC (Koruna)
Item		
Headphones	£15	450 KC
Suitcase	£34	750 KC
Music player	£26	810 KC

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Barbara thinks the total cost of these things was more in London than in Prague.

Is she correct?

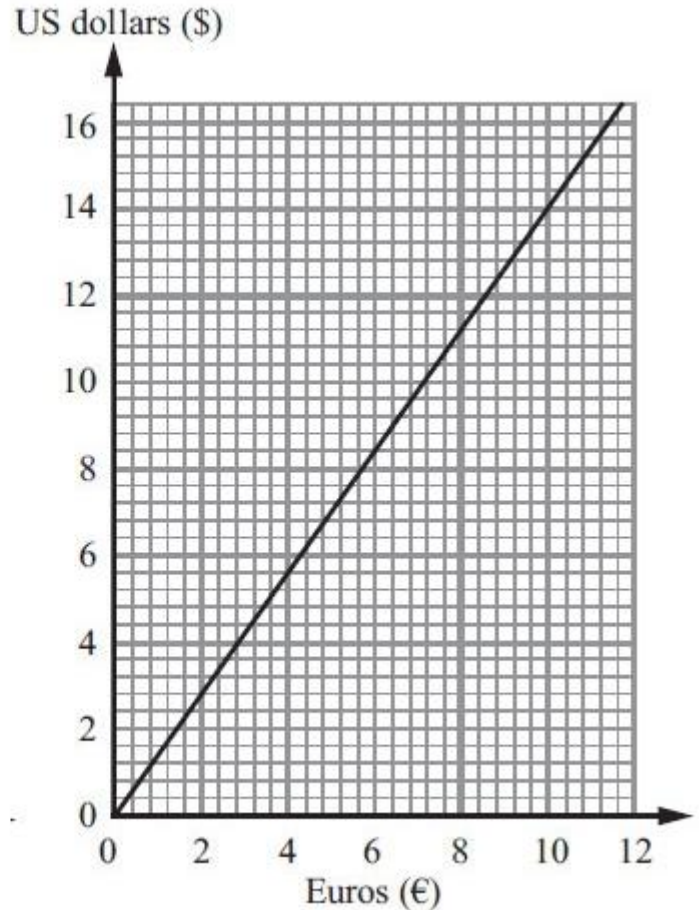
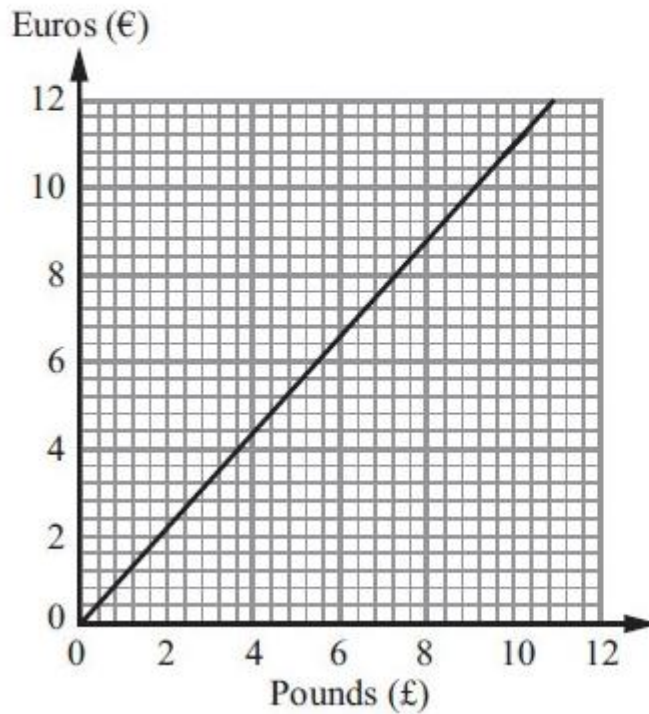
Give a reason for your answer.

You must show all your working.

(Total for Question is 5 marks)



Q5. These graphs can be used to convert between pounds (£), Euros (€) and US dollars (\$).



(a) Convert £6 to Euros (€).

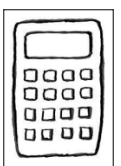
€

(1)

(b) Convert \$5 to Euros (€).

€

(1)



On the internet, Amir sees a pair of trainers.
The trainers cost \$65

(c) Work out the cost of the trainers in pounds (£).

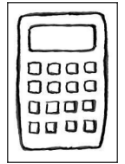
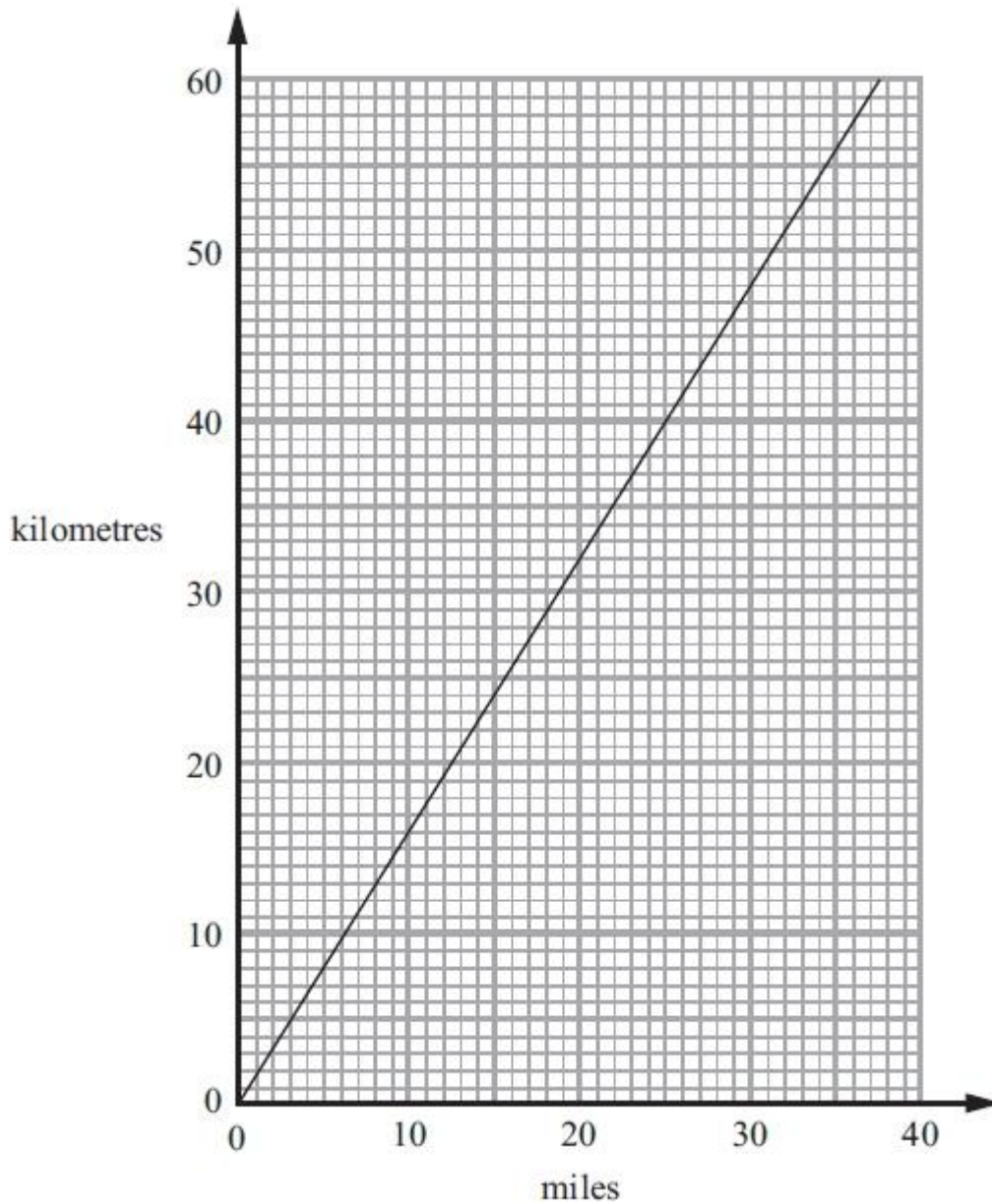
£..... (4)

(Total for Question is 6 marks)



EVALUATE REVIEW

Q6. This conversion graph can be used to change between miles and kilometres.



(a) Use the graph to change 30 miles to kilometres.

..... kilometres(1)

(b) Use the graph to change 40 kilometres to miles.

..... miles(1)

(c) Change 100 miles to kilometres.

..... kilometres(2)

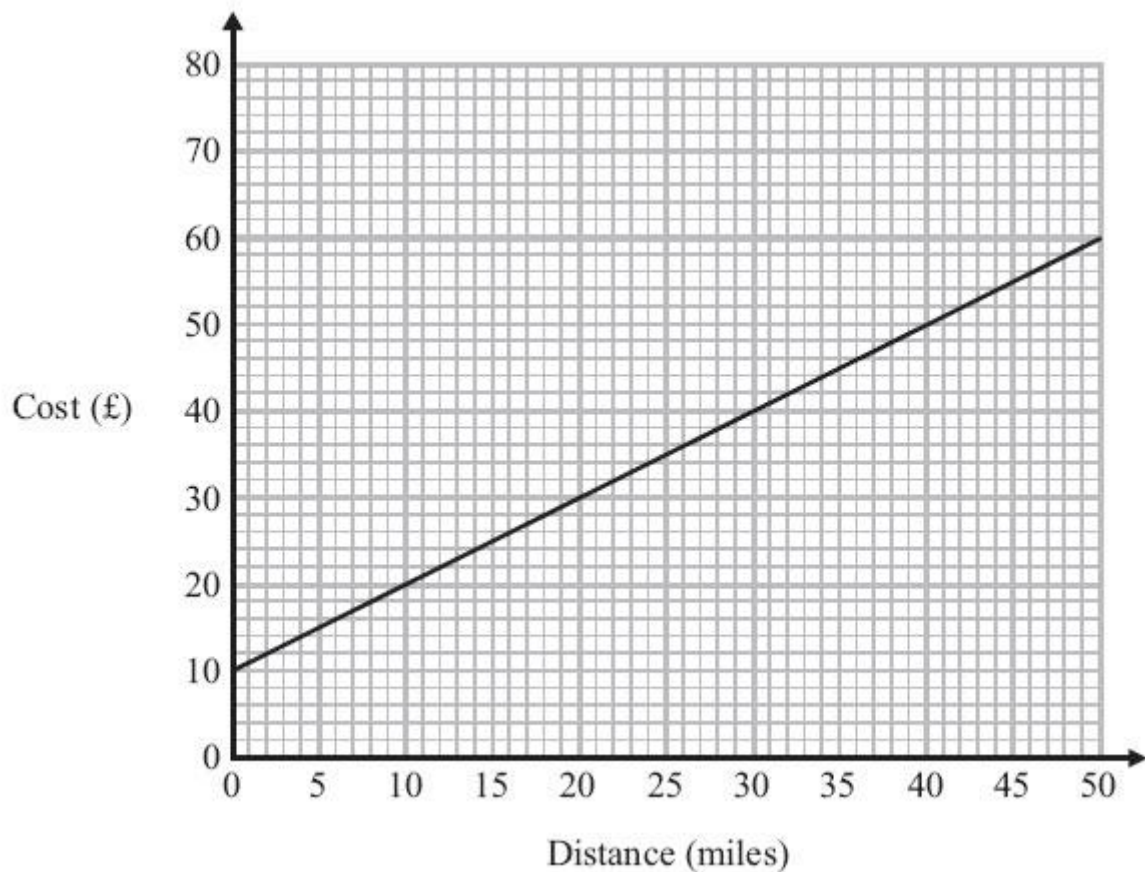
(Total for Question is 4 marks)



Q7.* Bill uses his van to deliver parcels.

For each parcel Bill delivers there is a fixed charge plus £1.00 for each mile.

You can use the graph to find the total cost of having a parcel delivered by Bill.



(a) How much is the fixed charge?

£

(1)

Ed uses a van to deliver parcels.

For each parcel Ed delivers it costs £1.50 for each mile.

There is **no** fixed charge.

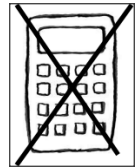
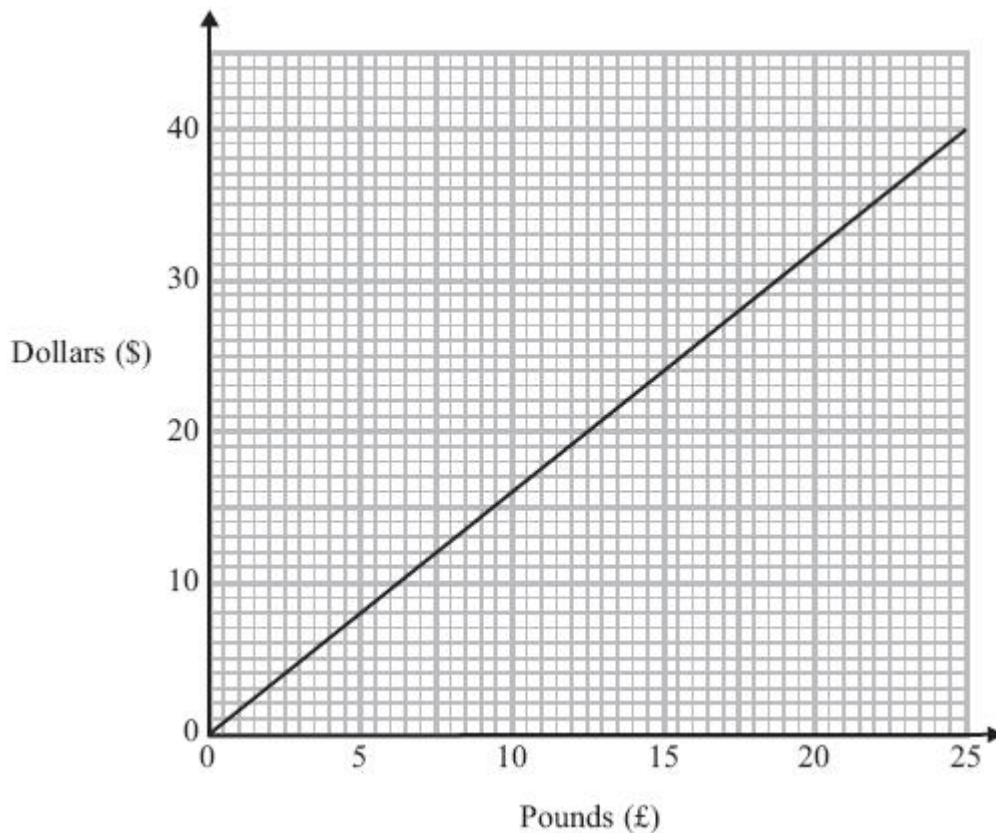
(b) Compare the cost of having a parcel delivered by Bill with the cost of having a parcel delivered by Ed.

(3)

(Total for Question is 4 marks)



Q8. You can use this graph to change between pounds (£) and dollars (\$).



(a) Change £20 into dollars (\$).

\$.....

(1)

In London, Sano headphones cost £60

In New York, Sano headphones cost \$100

Sano headphones cost more in New York than in London.

(b) How much more?

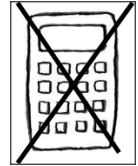
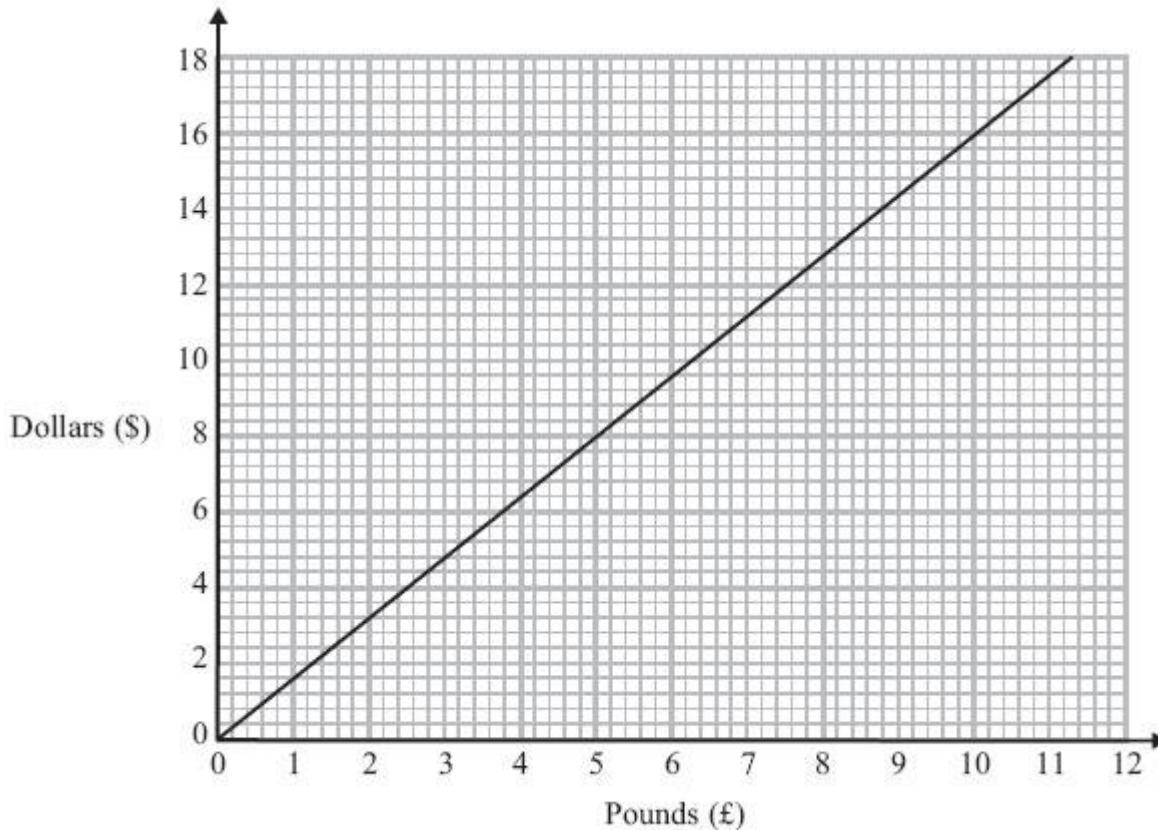
.....

(3)

(Total for Question is 4 marks)



Q9. You can use this conversion graph to change between pounds (£) and dollars (\$).



(a) Use the conversion graph to change £5 to dollars.

.....

(1)

Ella has \$200 and £800
Her hotel bill is \$600

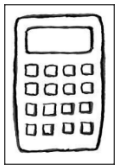
Ella pays the bill with the \$200 and some of the pounds.

(b) Use the conversion graph to work out how many pounds she has left.

.....

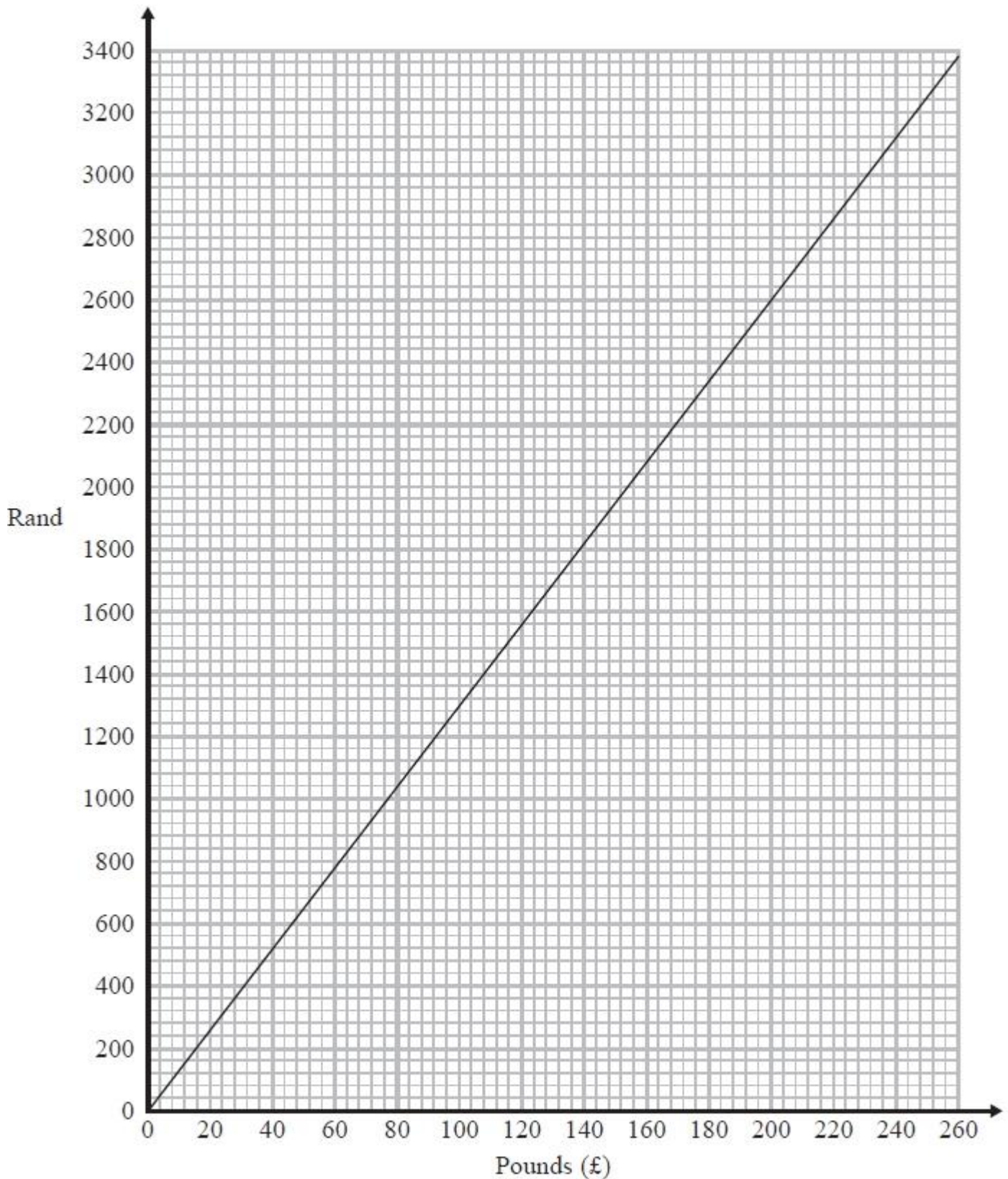
(4)

(Total for Question is 5 marks)



Q10.

Here is a conversion graph to change between UK pounds (£) and South African rand.



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Jo changes £200 into rand.

(a) How many rand does she get?

..... rand
(1)

Simon has £100 and 3700 rand.

He goes to a shop where he can spend both pounds and rand.

He wants to buy

a computer costing £360

or

a watch costing £400

or

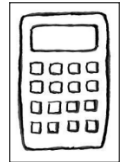
a camera costing £375

*(b) Which of these items can Simon afford to buy?

You must show clearly how you get your answer.

.....
(3)

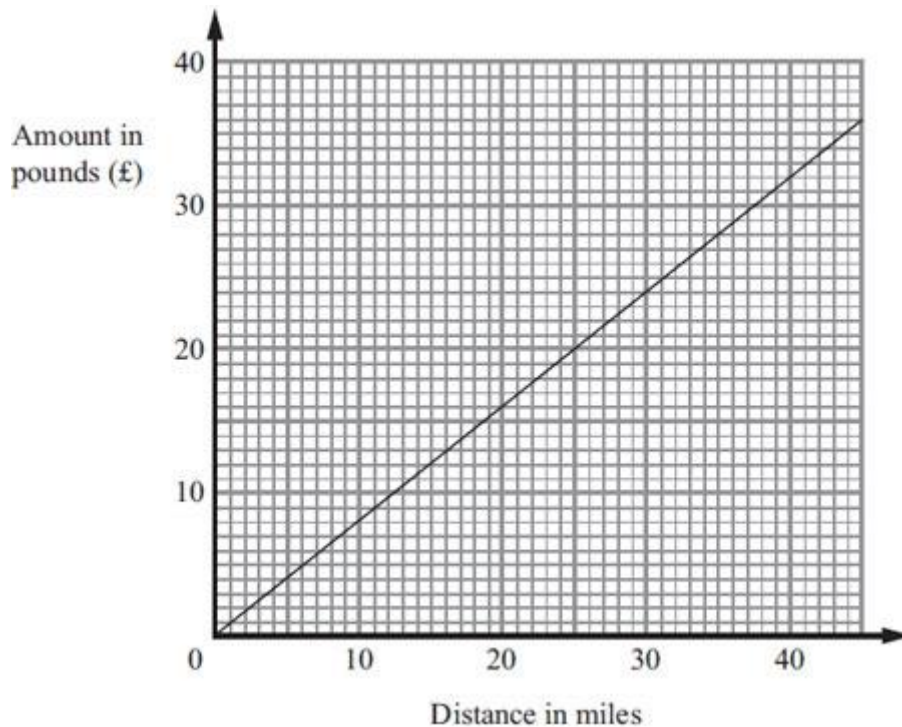
(Total for Question is 4 marks)



Q11.

Sophie's company pays her 80p for each mile she travels.

The graph can be used to work out how much her company pays her for travel.



Sophie travels 20 miles.

(a) Work out how much her company pays her.

£

(1)

Sophie's company paid her £60

(b) Work out the distance Sophie travelled.

..... miles

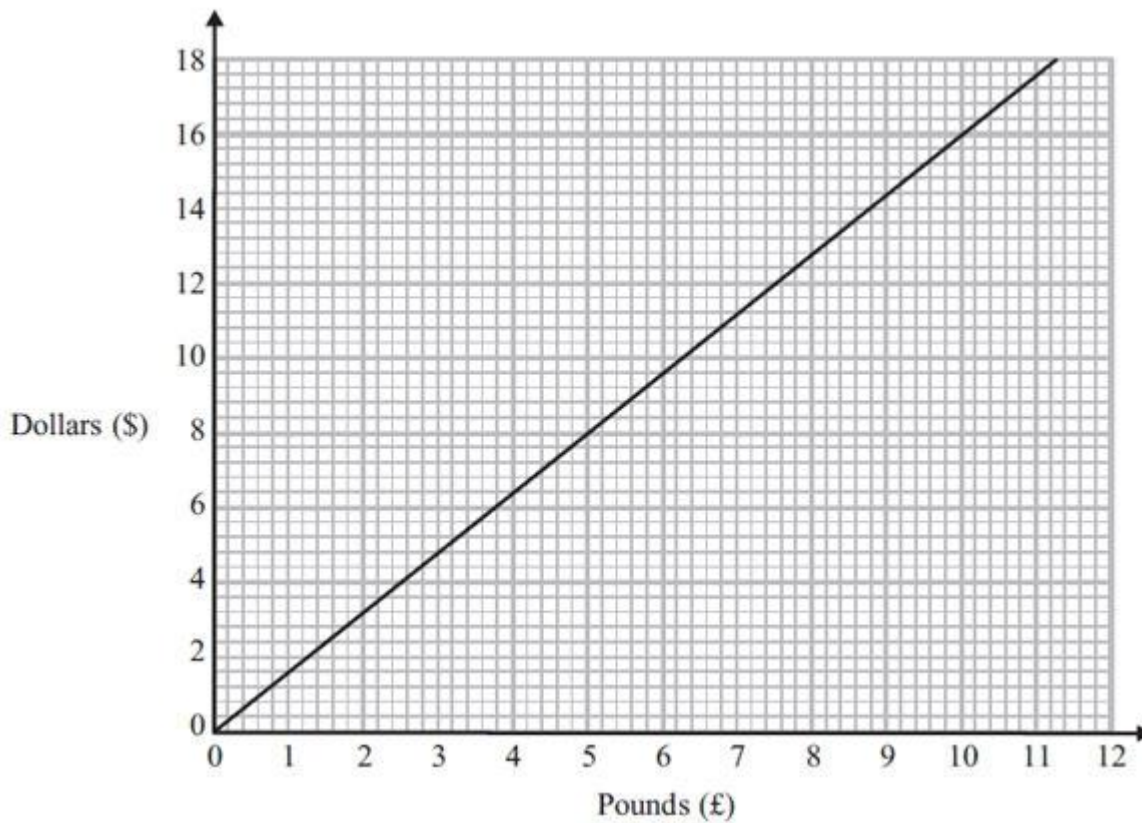
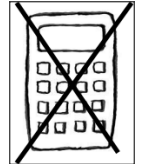
(2)

(Total for Question is 3 marks)



Q12.

You can use this conversion graph to change between pounds (£) and dollars (\$).



(a) Use the conversion graph to change £5 to dollars.

.....(1)

Ella has \$200 and £800

Her hotel bill is \$600

Ella pays the bill with the \$200 and some of the pounds.

(b) Use the conversion graph to work out how many pounds she has left.

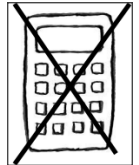
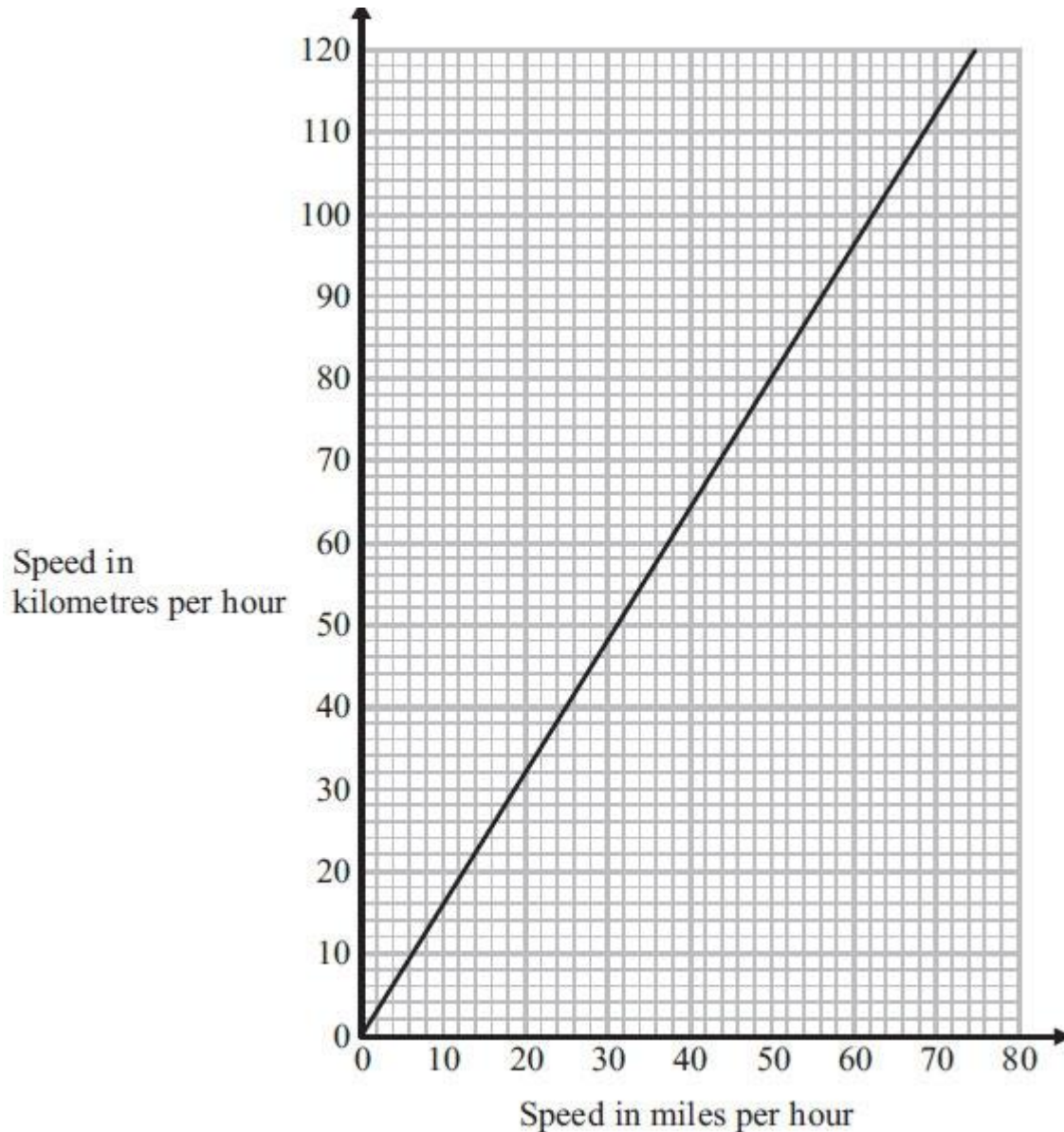
.....4)

(Total for Question is 5 marks)



Q13.

Here is a conversion graph.



You can use the graph to change between speed in miles per hour and speed in kilometres per hour.

(a) Change 30 miles per hour to kilometres per hour.

.....

(1)

(b) Change 72 kilometres per hour to miles per hour.

.....

(1)

Jack is in France.

He has to drive 180 miles to the ferry.

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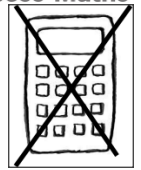
He has 3 hours to get to the ferry.

In France, Jack must not drive at a speed greater than 90 kilometres per hour.

* (c) Can Jack drive to the ferry in 3 hours?
You must show all your working.

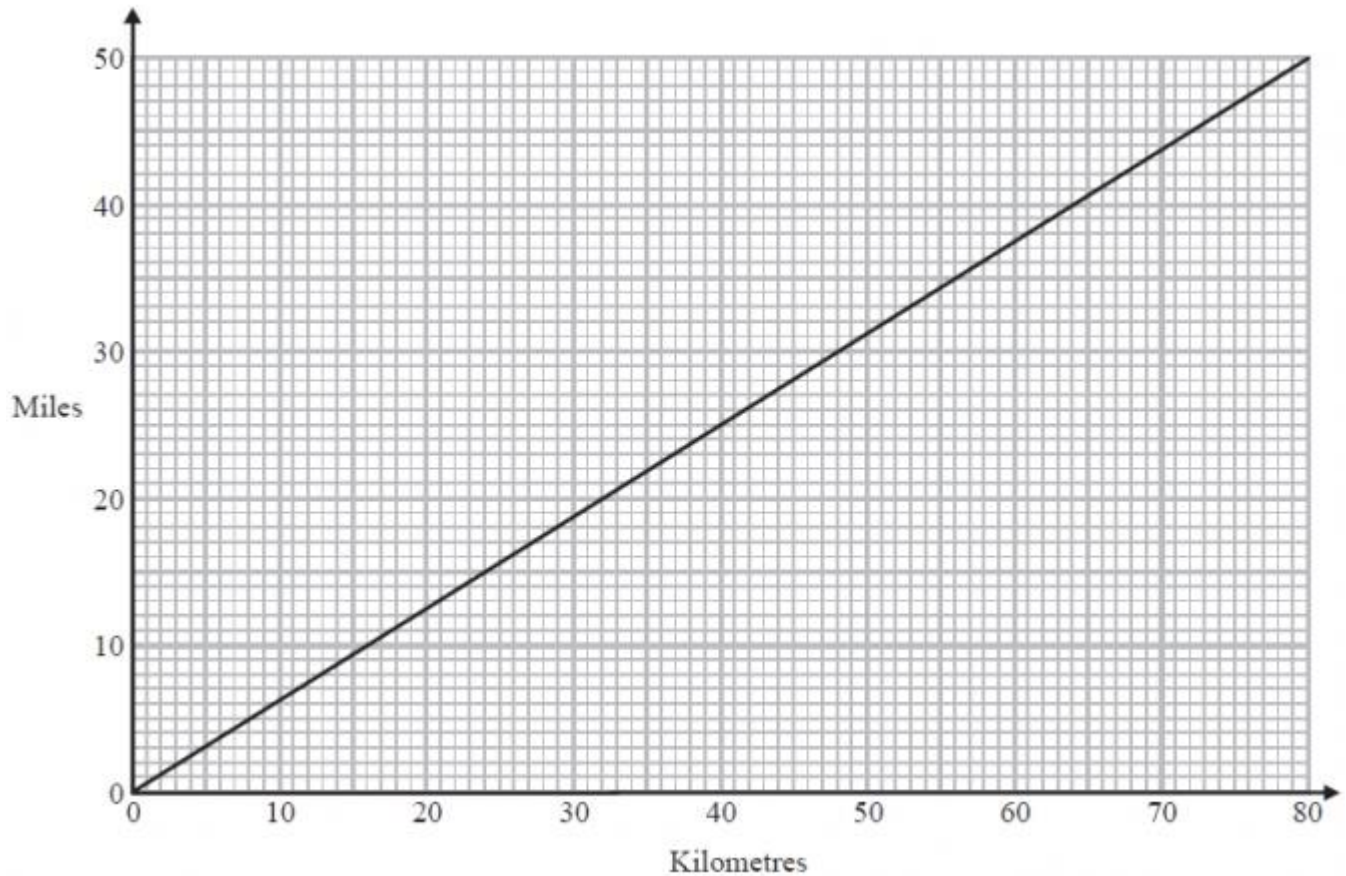
(3)

(Total for Question is 5 marks)



Q14.

You can use this conversion graph to change between miles and kilometres.



(a) Change 40 km into miles.

.....miles
(1)

(b) Change 35 miles into km.

.....km
(1)

Mary has to drive from Paris to Calais, and then from Dover to Sheffield.
The total distance she has to drive is 350 miles.

Mary has already driven 240 km from Paris to the ferry at Calais.
She goes on a ferry to Dover.
She now has to drive from Dover to Sheffield.

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Mary has enough petrol to drive 180 miles.

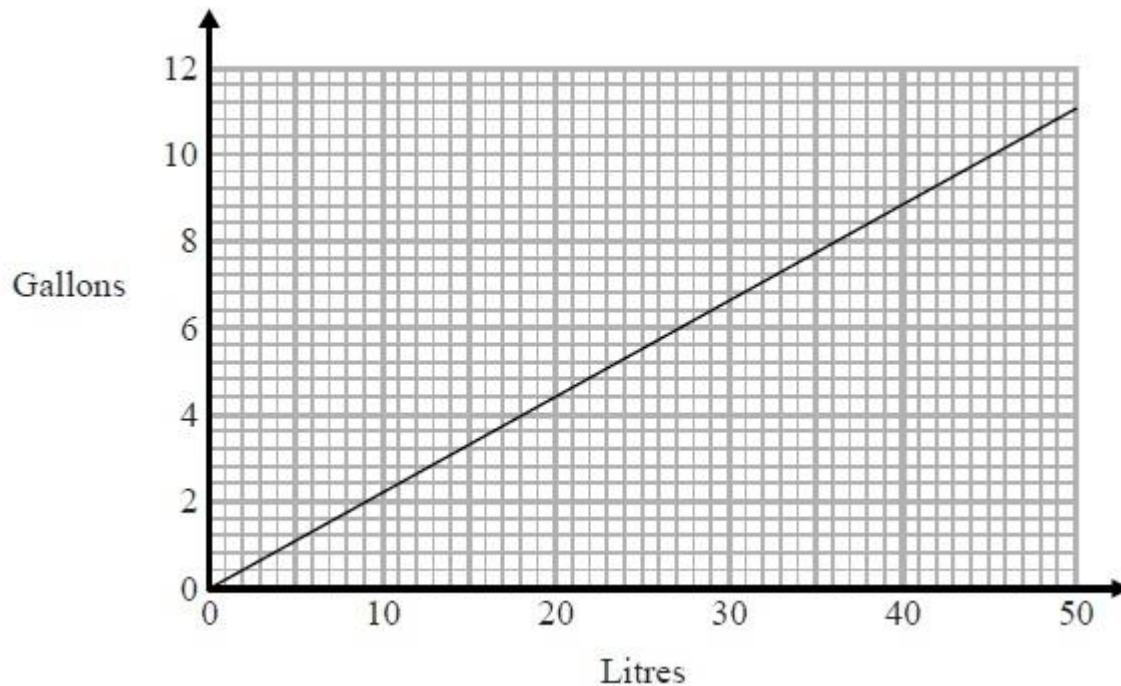
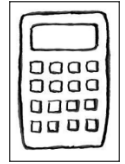
*(c) Will Mary have to stop for petrol on the way to Sheffield?

(4)

(Total for Question is 6 marks)



Q15.* You can use this graph to convert between litres and gallons.



Jack buys 8 gallons of diesel.

He pays £52

Francoise buys 40 litres of diesel.

She pays £58

Who got the better value for their money, Jack or Francoise?

You must show your working.

(Total for Question is 3 marks)

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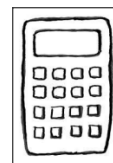
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Q1.

The two-way table shows some information about how some students travelled to school yesterday.

	Walk	Bus	Cycle	Total
Boys		4	4	13
Girls	2	6	3	11
Total	7	10	7	24

One of these students is picked at random.

Work out the probability that this student will be a boy who walked to school yesterday.

.....

(Total for Question is 3 marks)

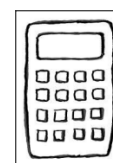
Q2. The two-way table gives some information about the drinks sold by a cafe on a Saturday and on a Sunday.

	Tea	Coffee	Squash	Total
Saturday	45		37	140
Sunday		47		
Total			87	299

(a) Work out the total number of drinks sold on Sunday.

.....

(1)



(b) Work out the total number of coffees sold on Saturday and Sunday.

.....

(2)

Rob and Mari each buy a drink at the cafe.
The cafe only sells tea, coffee and squash.

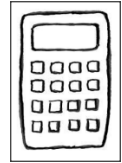
(c) Write down all the possible combinations they can choose.

(2)

(Total for Question is 5 marks)



Q3. The two-way table shows some information about the numbers of boys, girls and teachers at three schools.



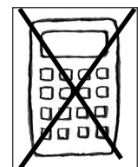
	School A	School B	School C	Total
Boys	85	29	54	
Girls		31	47	171
Teachers	13	5		
Total	191			366

Complete the two-way table.

(Total for Question is 3 marks)

Q4. Felicity asked 100 students how they came to school one day.
Each student walked or came by bicycle or came by car.

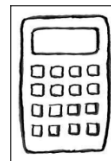
- 49 of the 100 students are girls.
- 10 of the girls came by car.
- 16 boys walked.
- 21 of the 41 students who came by bicycle are boys.



Work out the total number of students who walked to school.

.....

(Total for Question is 4 marks)



Q5. There are 72 guests staying in a hotel.
They are French or German or Spanish.

The two-way table shows some information about the guests.

	French	German	Spanish	Total
Female	17		14	40
Male		13		32
Total	29		21	72

(a) Complete the two-way table.

(2)

One of these guests is picked at random.

(b) Write down the probability that the guest is female.

.....

(1)

One of the male guests is picked at random.

(c) Write down the probability that this male guest is German.

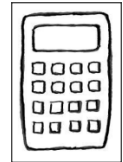
.....

(1)

(Total for Question is 4 marks)



Q6.



The two-way table shows information about the numbers of students on a school trip.

	Year 8	Year 9	Year 9	Total
Girls	15		12	44
Boys		22		
Total			28	100

Complete the two-way table.

(Total for Question is 3 marks)

Q7.

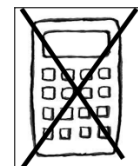
There are 40 people at a meeting.

Each person travelled to the meeting either by car or by train.

13 of the people are male.

10 females travelled by train.

8 males travelled by car.



Work out the total number of people who travelled by car.

.....
(Total for Question is 3 marks)



Q8. 50 people each did one activity at a sports centre.

Some of the people went swimming.

Some of the people played squash.

The rest of the people used the gym.

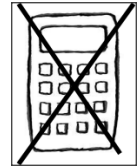
21 of the people were female.

6 of the 8 people who played squash were male.

18 of the people used the gym.

9 males went swimming.

Work out the number of females who used the gym.



(Total for Question is 4 marks)

Q9. 120 children went on a school activities day.

Some children went bowling.

Some children went to the cinema.

The rest of the children went skating.

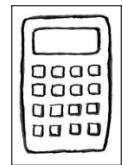
66 of these children were girls.

28 of the 66 girls went bowling.

36 children went to the cinema.

20 of the children who went to the cinema were girls.

15 boys went skating.



Work out the number of children who went bowling.

(Total for Question is 4 marks)



Q10.

There are 130 adults at a language school.

Each adult studies one of French or Spanish or German.

96 of the adults are women.

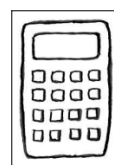
12 of the women study French.

73 of the adults study Spanish.

55 of the women study Spanish.

9 of the men study German.

How many of the adults study French?



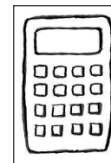
.....
(Total for Question is 4 marks)



Q11.

There are 57 musicians in an orchestra.

Each musician plays a brass instrument or a woodwind instrument or a string instrument.



The incomplete two-way table gives information about the musicians.

	Brass	Woodwind	String	Total
Female	4			
Male		5		27
Total		20	21	57

(a) Complete the table.

(3)

(b) Write down the number of male musicians who play a woodwind instrument.

.....

(1)

(c) Write down the number of female musicians who do **not** play a string instrument.

.....

(1)

(Total for Question is 5 marks)



Q12. A teacher asked 30 students if they had a school lunch or a packed lunch or if they went home for lunch.

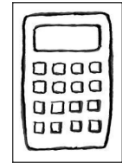
17 of the students were boys.

4 of the boys had a packed lunch.

7 girls had a school lunch.

3 of the 5 students who went home were boys.

Work out the number of students who had a packed lunch.

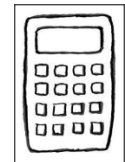


.....
(Total for Question is 4 marks)

Q13. There are 40 children in a ski club.
Each child has one pair of skis.

The skis are

twin tipped skis
or downhill skis
or slalom skis.



There are 23 boys in the ski club.

7 of the boys have twin tipped skis.

8 of the girls have downhill skis.

5 of the 9 children with slalom skis are girls.

Work out the number of children with twin tipped skis.

.....
(Total for Question is 4 marks)

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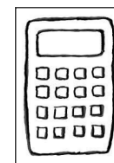
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Q14.

On an activity day students play one sport.

They play football or hockey or tennis.

120 students are on the activity day.

30 of the students are boys.

12 of the boys and 26 of the girls play hockey.

45 of the students play football.

35 of the 45 students who play football are girls.

Work out the number of girls who play tennis.

.....
(Total for Question is 4 marks)