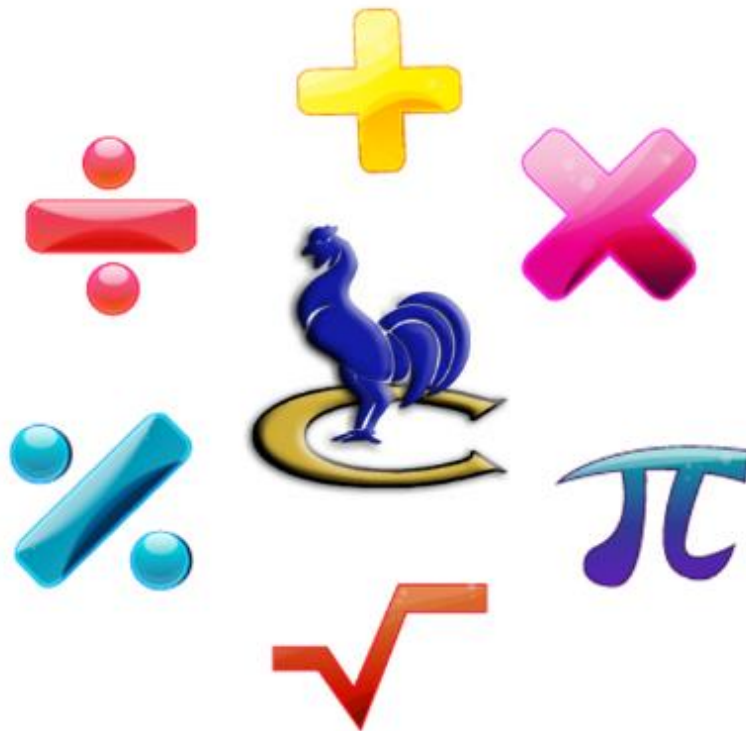# Key Stage 4

Foundation Number Revision

Name:

Teacher:

Numeracy Non-Calculator

2. An apartment block is 12 floors high.
   It also has 3 floors of underground parking.

   All floors are connected by a lift.
   The ground floor is labelled *Level 0* in the lift.

   The first floor of underground parking is one floor below the ground floor.
   It is labelled *Level –1* in the lift.

   (a) What is the third floor of underground parking labelled in the lift?
       Circle your answer.   [1]

   Level 3   *Level –3*   *Level –2*   *Level 13*   *Level 2*

   (b) Jen is at *Level 7*.
       She travels down 9 floors to where she parks her car.
       What level is this labelled in the lift?   [1]

   (c) Anna parks her car on the floor that is labelled *Level –1* in the lift.
       She travels up 10 floors to her apartment to collect a present for her friend, Brodie.
       She then travels down 5 floors to Brodie's apartment.
       What level is Brodie's apartment labelled in the lift?   [2]

2. *(a)* The show, *Joseph and The Amazing Technicolor Dreamcoat*, is on at the theatre.

(i) The show starts at 7:30 p.m.

The show is in 2 acts.

Act 1 is 42 minutes long.

There is an interval of 20 minutes.

Act 2 is 48 minutes long.

At what time will the show end? [4]

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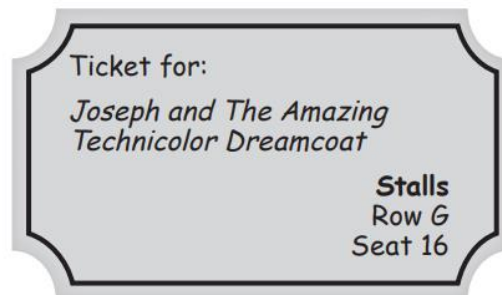
(ii) Mr and Mrs Hanbury book seats for the show.

Mr and Mrs Hanbury's tickets are shown below.

Ticket for:

Joseph and The Amazing Technicolor Dreamcoat

Stalls
Row G
Seat 15

Ticket for:

Joseph and The Amazing Technicolor Dreamcoat

Stalls
Row G
Seat 16
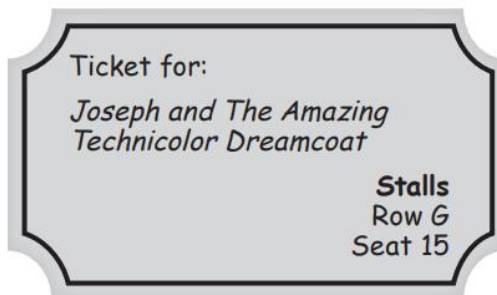
Circle these seats on the seating plan of the theatre shown on the next page. [1]

Circle

H	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
G	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
F	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
E	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
D	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
C	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
B	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
A	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Stalls

K	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
J	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
H	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
G	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
F	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
E	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
D	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
C	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
B	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
A	♿ ♿ 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ♿ ♿

Pit

CC	1 2 3 4 5 6 7 8 9 10 11 12
BB	1 2 3 4 5 6 7 8 9 10
AA	1 2 3 4 5 6 7 8

Stage

(b) In a survey, people were asked, "Have you been to any arts events in Wales in the last year?"

The percentages of people answering "Yes" or "No" were calculated.

The results for some local authorities are shown in the table below.

Local Authority	Yes %	No %
Isle of Anglesey	60	40
Conwy	64	36
Flintshire	56	44
Powys	58	42
Pembrokeshire	57	43
Swansea	56	44
Bridgend	58	42
Cardiff	67	33
Merthyr Tydfil	47	53
Blaenau Gwent	46	54
Monmouthshire	61	39

Use the information in the table to answer the following questions.

(i) Which local authority has the largest percentage of people who answered "Yes"? [1]

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(ii) How many local authorities have a greater percentage of people answering "No" rather than "Yes"? [1]

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(iii) What is the range of the percentage of people who answered "No"?
Circle your answer. [1]

33%   21%   44%   11%   54%

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

Aled plans a Christmas party.
He decides to use *Table Toppers* to supply tables, chairs and catering.
The circular tables each seat 6 people and the rectangular tables each seat 10 people.
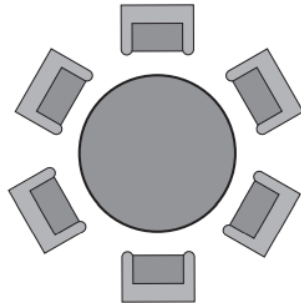
Table Toppers charge as shown below.

Table Toppers		
Hiring Fees	Circular tables	£3 each
	Rectangular tables	£4 each
	Chairs	£2 each
Catering	Buffet	£9 per person
	Hog Roast	£12 per person

All the people invited to the party will fit around 3 circular tables and 2 rectangular tables.
There will be no spare seats.

Aled hires 3 circular tables, 2 rectangular tables, and a chair for each person at the party.
He decides to provide a buffet meal for each person.

How much does *Table Toppers* charge Aled in total?
You must show all your working. [6 + 2 OCW]

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

Cai wants to buy a new computer.
The total cost of the computer is £400.

Cai's parents give him 15% of the cost of the computer.

Cai's grandparents give him $\frac{2}{5}$ of the cost of the computer.

Cai saves £30 each month.

How many months will it take Cai to save enough money to buy the computer? [8 + 2 OCW]

3.

Gwenda wants to raise money for the children's ward of her local hospital.
She would like to complete a sponsored walk of 90 miles along part of the coastal path of Wales.

(a) Gwenda is sponsored a total of £3 per mile by her family and friends.
Also, a local company will give her 40% of the total amount she receives from her family and friends.
How much money will the local company give Gwenda if she completes the walk?   [3]

4. Mrs Henry works part time in a factory.
The amount of time for each day that she worked last week is shown in the table.

Day	Hours worked
Tuesday	$3\frac{1}{2}$
Wednesday	4
Thursday	$4\frac{1}{2}$
Friday	5
Saturday	3

Mrs Henry's pay is calculated using the following:

Tuesday to Friday:
- £8 per hour for the first 15 hours
- £9 per hour for any extra hours

Saturday:
- double the usual rate of £8 per hour

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

Work out Mrs Henry's total pay for last week.
You must show all your working. [6 + 2 OCW]

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(b) On another week Mrs Henry was paid £188.

She puts 20% of her weekly wage into a savings account.

How much did Mrs Henry put into her savings account that week?
Circle your answer. [1]

£9.40   £18.80   £34.20   £37.60   £150.40

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(ii) The match between the two clubs will take place on 24th November 2019.

NOVEMBER 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					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

The table shows when players are available to play.
The club needs 6 players for the match.

Using the end column in the table below, tick the 6 players who should be available on 24th November. [2]

Player	Days they can play	Players available on 24th November
Caroline	Tuesday and Friday	
Tracey	Every day	
Lisa	Weekends	
Sian	Monday, Tuesday and Friday	
Jan	Every day	
Heather	Monday to Friday	
Alys	Wednesday and Friday	
Nafeesa	Tuesday, Friday and Sunday	
Molly	Wednesday and Sunday	
Alicia	Tuesday and Weekends	

4. A local community group is going to have a stall selling lemonade at a summer fete.
The group needs to buy cups and bottles of lemonade.

Each bottle of lemonade contains 1000 ml and costs 90p.
One packet of 100 cups costs £4.

The group plans to buy enough to sell 300 cups of lemonade.
Each cup will contain 200 ml of lemonade.

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

How much will it cost to buy everything that is needed to sell 300 cups of lemonade?

[6 + 2 OCW]

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(b) The community group sells each cup of lemonade for 50p.
How much profit will the community group make if they sell all 300 cups of lemonade?

[3]

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6.

Small bottle
300ml for 66p

Medium bottle
400ml for 92p

Large bottle
500ml for £1.25

(a) Roland is going to buy some orange juice for a party.
Which size bottle of orange juice offers the best value for money?
You must show your working. [3]

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(b) Galina needs to buy **exactly** 800 ml of orange juice.
Which is the best option for Galina?
You must show your working and consider all options.
You must give a reason for your choice. [3]

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5. Climbers use the rule that the temperature decreases by 6°C for every 1000 m that they climb.

This can be written as a formula:

$$\text{temperature loss} = \frac{6 \times \text{gain in height in metres}}{1000}$$

Mary plans to climb Snowdon in Wales before she climbs Mount Kilimanjaro in Africa.

The table below gives the gain in height when climbing each mountain.
The gain in height is given in metres.

Mountain		Gain in height
Snowdon		945 metres
Mount Kilimanjaro		4085 metres

Estimate the temperature loss when Mary climbs each mountain.
You must show all your working. [4]

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Estimate of Snowdon temperature loss = ... °C

Estimate of Mount Kilimanjaro temperature loss = ... °C

6.

(b) Last year, the walk raised a total of £3600.
It cost £180 to organise the walk last year.
Give the cost of organising the walk as a percentage of the total raised. [2]

(c) This year, walkers will be charged to take part.
Aber Young Farmers decided that:

charge in pence = 3 × height of the walker in cm

What is the height of the shortest walker who will need to pay a charge of more than £5?
Give your answer correct to the nearest cm.
You must show all your working. [3]

6. Sioned works in a grocery shop.
She has made a poster for the window of the shop.

Strawberries
£8.60 per kg

Raspberries
Today's special offer

.... per kg

Sioned has forgotten to write the price of raspberries on the poster.

Mr Thomas buys $\frac{1}{4}$ kg of strawberries and $1\frac{1}{2}$ kg of raspberries.

He pays with a £20 note.
He gets £2.55 change.

Calculate the price of 1 kg of raspberries.
You must show all your working. [6]

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8. Aled and Gareth went on holiday to France.

   (a) The total cost of the holiday was £660.

   - Aled's mother paid $\frac{1}{3}$ of the total cost.

   - Aled and Gareth shared the remaining cost in the ratio 1 : 9.

      (i) Calculate how much each person paid towards the cost of the holiday. [4]

      Aled's mother paid £ ....

      Aled paid £ ....

      Gareth paid £ ....

      (ii) Explain how you could use your answers to check that they are correct. [1]

9. (a) Students are taking tests in English and Welsh.
      The English test is marked out of 80.
      The Welsh test is marked out of 70.

      (i) Dyfed scores 35 in his English test.
          Estimate Dyfed's score as a percentage.
          Circle your answer. [1]

          4%   20%   23%   44%   51%

      (ii) Liam scores 22 in his Welsh test.
           Estimate Liam's score as a percentage.
           Circle your answer. [1]

          0·3%   3%   22%   31%   40%

8.

**Maes Alun Camping
Charges**

Tents covering ground area:
- less than or equal to $12\,m^2$ cost   £14 per night
- greater than $12\,m^2$ cost   £16 per night

<u>AND</u>

Charge per person: £4 per night

Stay 5 nights and get the next night **completely free**.
This means **no charge** for tents or people on **every 6th night.**

Rhodri and Lars are planning a camping holiday, staying at *Maes Alun Camping*.
They are going to:
- take only one tent between them,
- take a tent covering a rectangular ground area, measuring 2·5 metres by 4·4 metres,
- both stay for a total of 12 nights.

Their holiday is just 8 weeks away.
They **each** plan to save £15 per week from now until their holiday in 8 weeks' time.

Will the amount they save be enough to pay for their holiday?
You must show all your working.   [8]

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10. Ms Logan is calculating her next water bill.
She knows that her fresh water usage is 20 m³.

On the water company's website she finds the following:

> ### Water charges
>
> - The waste water output is calculated as 80% of the fresh water usage.
> - Fresh water usage costs £1.10 per m³.
> - Waste water output costs £1.50 per m³.

Calculate Ms Logan's water bill. [4]

10. Marcin has a market stall to sell his printed T-shirts.

It costs him:
- £250 to buy 100 **plain** T-shirts,
- 50p to print a design on each T-shirt.

Marcin sells his printed T-shirts for £4.00 each.

At the start of the week:
- His bank account balance is £820.
- Marcin has 100 printed T-shirts ready to sell.
- He has already paid for these printed T-shirts.

During the week:
- Marcin sells his stock of 100 T-shirts.
- He pays all the money he takes from selling T-shirts into his bank account.
- He buys and prints another 400 T-shirts.
- Marcin **does not** sell any of these 400 T-shirts.

How much will Marcin have in his bank account at the end of this week?
You must show all your working. [4]

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11. When it is 21:30 on a Tuesday in London, it is 02:30 on a Wednesday in Dhaka, Bangladesh.

It takes 10 hours 30 minutes to fly from Dhaka to London.
A flight leaves Dhaka on Thursday at 13:00 local Dhaka time.

On what day and at what time should this flight arrive in London?
Give your answer in local London time.   [4]

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Arrival in London:

Day ....   Time ....

11. Liam buys 3 kg of apples and 2·5 kg of pears.
Pears cost £3.40 per kilogram.
Liam pays a total of £12.40 for the apples and pears.

Calculate the cost of one kilogram of apples. [6]

12. Waldo doesn't mind which type of pasta he buys.

In the supermarket, Waldo sees the three packets of pasta shown below.

Strozzapreti pasta	Fusilli pasta	Rigatoni pasta
500g for £1.25	400g for 96p	250g for 65p

Which pasta offers Waldo the best value for money?
You must show all your working. [3]

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Numeracy Calculator

1. Geraint went to a petrol station and put petrol in his car.
    This was the display on the petrol pump.
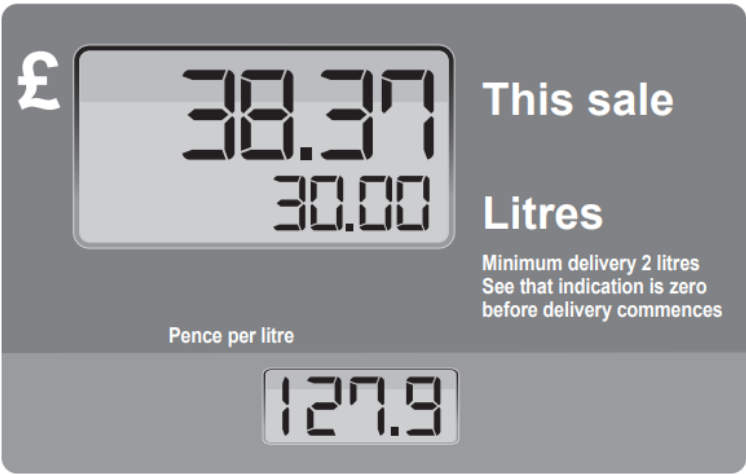
    Geraint put 30 litres of petrol in his car.
    The price of petrol was 127.9 pence per litre.
    The cost of the petrol was £38.37.

    (a) The following week the price of petrol was 128.9 pence per litre.
         Geraint put 40 litres of petrol in his car.
         What was the cost of the petrol?
         Give your answer in **pounds** (£).   [3]

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    Cost of 40 litres of petrol was £ ....

    (b) The display below shows the cost of 35 litres of petrol.
         Calculate the price per litre of petrol.
         Give your answer in pence.   [3]
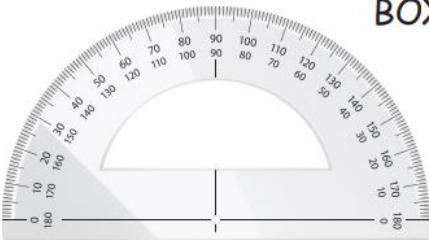
This Sale £	44.38
Litres	35.00
Pence per litre	....

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1. Mrs Jones is a mathematics teacher.
   She orders some equipment for her department.

   She sees the following items in a catalogue from a stationery company.

PROTRACTORS BOX OF 50 £3.45

RULERS BOX OF 50 £4.99

PAIR OF COMPASSES BOX OF 25 £24.59

SCIENTIFIC CALCULATOR £12.99 EACH

(a) Mrs Jones buys the items listed below.

Complete the following table to show her bill for these items. [4]

Item	Cost
1 box of protractors	£3.45
4 boxes of rulers	£
3 boxes of compasses	£
30 scientific calculators	£
Total	£

(b) The company offers Mrs Jones a discount of 25% off the total cost of these items.
How much discount does she receive? [2]

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(c) After paying for the items, Mrs Jones has £164 left to spend on equipment for the department.
She wants to spend the remaining money on buying as many scientific calculators as possible.
There will be no discount on this order.
How many extra calculators can Mrs Jones buy? [2]

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Mrs Jones can buy .... extra calculators.

2. A company calculates its postage costs by using the following formula:

Total postage costs (£) =

number of *small letters* × 0.65 + number of *large letters* × 0.98

(a) Here is a note showing how many *small letters* and *large letters* were posted in a particular week.

Total postage costs = ...

143 small letters

50 large letters

Calculate the total postage costs for this week. [3]

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

Here is a note showing the total postage cost and the number of *small letters* posted the following week.

Total postage cost = **£119.47**

125 small letters

..... **large letters**

Find how many *large letters* were posted that week.
You must show all your working.   [4 + 2 OCW]

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2. In 2011, the number of people able to speak Welsh, and the number of people not able to speak Welsh, in each local authority in Wales were recorded.
The table below shows some of this information.

Local authority	Able to speak Welsh	Not able to speak Welsh	Total
Isle of Anglesey	38 568	28 835	67 403
Gwynedd	77 000	40 789	117 789
Denbighshire	22 236	68 291	90 527
Flintshire	19 343	127 597	
Powys	23 990	105 093	129 083
Ceredigion	34 964	38 883	73 847
Pembrokeshire	22 786	95 606	118 392
Swansea		204 823	231 155
Cardiff	36 735	295 538	332 273
Caerphilly	19 251	152 721	171 972
Newport	13 002	126 847	139 849

(a) What is the number of people **not able** to speak Welsh in Ceredigion written correct to the nearest **thousand**?
Circle your answer. [1]

40 000   39 000   38 900   38 000   38 800

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(b) How many people were **able** to speak Welsh in Caerphilly?
Write your answer in words. [2]

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(c) How many people were **able** to speak Welsh in Swansea?
Circle your answer. [1]

435 978   204 823   231 155   26 332   22 786

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(d) In total, how many people lived in Flintshire?
Circle your answer. [1]

127 597   129 083   19 343   108 254   146 940

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(e) The Welsh Government wants to increase the number of people able to speak Welsh.
Its target is **one million** people by the year 2050.
In 2011, it was recorded that there were 562 016 people able to speak Welsh in Wales.

How many more people able to speak Welsh are needed in Wales by 2050 for the Welsh
Government to hit this target? [2]

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2. *(a)* David and Gwyn have decided to take part in a charity running event.
They both ordered some new running kit from an online discount store.

A pair of trainers	A pair of socks	A pair of leggings
£39.99	£2.99	£12.90
A running vest	A pair of shorts	A water bottle
£15.50	£11.98	£6.00

(i) David ordered the following items:
  • 1 pair of trainers,
  • 2 pairs of shorts,
  • 3 pairs of socks.
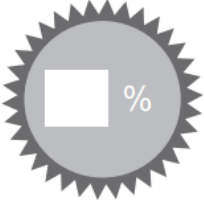
What was the total cost of these items?
You must show all your working. [3]

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(ii) The discount store has a delivery charge of £6.99 for all orders under £100.
For all orders of £100 or over, delivery is free.
Gwyn calculated that the cost of the items in his order would be £96.62.

Explain how Gwyn would actually save money by adding two pairs of socks to his order.

You must show all your working. [3]

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(b) David aims to raise £200 for his chosen charity.
He set up a "Sponsor me please" page on social media.
This is David's page at the end of the first week.
The percentage has been blanked out.

David's Page
David is raising money for a charity.
Please help him to reach his target of £200.

Donate

Current total raised
£32.00

☐ %

(i) How much more money did David need in order to reach his target? [1]

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(ii) David thought he had raised more than 15% of his target.
Was he correct?
Show your working. [2]

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(iii) After two weeks, David had raised 57% of his target.
What percentage of his target was still to be raised? [1]

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2. Mr Jones and his family visited a café for breakfast.
They ordered from the breakfast menu.

BREAKFAST MENU

Full breakfast £7.50 (Child's breakfast half price)	Tea £1.85
Cereal £2.95	Coffee £1.85
Toast and jam 95p	Fruit juice £1.95

(a) Complete their bill. [4]

ITEM	COST (£)
2 full breakfasts	£15.00
1 child's breakfast	
4 toast and jam	
3 teas and 2 coffees	
TOTAL	

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

Mr Jones paid for the breakfast with two £10 and three £5 notes, and told the waitress to keep the change as a tip.
A reasonable tip is thought to be more than 10% of the total cost of the bill.

Explain whether or not Mr Jones gave the waitress a reasonable tip.
You must show all your working. [4 + 2 OCW]

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3. The number of people entitled to vote at a National Assembly for Wales election in 2014 is given below.

Region	Number of people
South Wales	1 358 971
Mid Wales	423 357
North Wales	471 891
Total	

(a) What is the total number of people entitled to vote? [1]

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(b) The South Wales region is split into South West, Central and South East Wales.

South Wales region	Number of people
South West	395 019
Central	496 249
South East	
Total	1 358 971

What is the total number of people entitled to vote in South East Wales? [2]

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4.

> **Bus timetable from Orme Station to Outlet Village**
>
> Only 55 minutes from Orme Station direct to Outlet Village.
>
> Buses leave the station
> * every 12 minutes from 8 a.m. until 12 noon
> * every 24 minutes from 12 noon until 10 p.m.

(a) At what time does the first bus after 09:00 leave Orme Station?
Circle your answer.   [1]

09:05   09:12   09:18   09:24   09:30

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(b) Gwil looks at the timetable shown above.
He decides to take the latest possible bus to be at Outlet Village by 15:00.

At what time will Gwil arrive at Outlet Village?
You must show all your working.   [2]

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4. Evan wears a fitness watch that shows the time and the number of steps he has taken during the day.

Evan goes for a run one evening.
The displays on his watch at the beginning of the run and at the end of the run are shown below.

Beginning of the run

TIME

19:38

STEPS

2656

End of the run

TIME

20:14

STEPS

10538

(a) For how long did Evan run?
Circle your answer. [1]

24 minutes   22 minutes   52 minutes   36 minutes   76 minutes

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(b) Write, in words, the number of steps displayed on Evan's watch at the **end** of the run. [1]

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(c) Evan wants to know how many miles he has run.
The number of steps taken to complete one mile depends upon the runner's height.
The table below, taken from the internet, gives this information.

Evan is 5 feet 7 inches tall.

Height	Steps per Mile
5 feet	2514 steps
5 feet 1 inch	2473 steps
5 feet 2 inches	2433 steps
5 feet 3 inches	2395 steps
5 feet 4 inches	2357 steps
5 feet 5 inches	2321 steps
5 feet 6 inches	2286 steps
5 feet 7 inches	2252 steps
5 feet 8 inches	2218 steps
5 feet 9 inches	2186 steps
5 feet 10 inches	2155 steps
5 feet 11 inches	2125 steps
6 feet	2095 steps

How many miles did Evan run? [4]

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

140 pupils are going to a concert.
The table below shows the cost of the different types of ticket.

Ticket	Cost per ticket
SEATED	£84.50
STANDING	£49.50

Of these 140 pupils:
- 35% have bought SEATED tickets,
- the remaining pupils have bought STANDING tickets.

Calculate the total cost of the tickets bought by the 140 pupils.
You must show all your working.

[6 + 2 OCW]

5. Luigi lives in south Wales.
Rosina lives in west Wales.
For each of the first 65 days of 2017, they recorded whether or not it rained.

Luigi recorded that it rained on 28 of these days.
Rosina recorded that it rained on 40% of these 65 days.

Luigi says,

'For the first 65 days of 2017, there were more days with rain where I live than where Rosina lives.'

Is Luigi correct?
You must show all your working. [3]

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5. Ceri and Paulo both sit the same mathematics test.
The test is marked out of 125.

Ceri scores 78 marks in the test.
Paulo's result is 64%.

Who has the higher result in this mathematics test?
You must show all your working. [3]

5. Dafydd plans to hire a van.
   He can only hire the van for a **whole number of days**.
   The cost of hiring the van is given by the formula:

   ## hire cost = £42 × number of days + booking fee

   (a) Circle either TRUE or FALSE for each of the following statements. [2]

When the booking fee is £18, the hire cost for 2 days is £102.	TRUE	FALSE
The hire cost is always greater than the booking fee.	TRUE	FALSE
When the van is hired for one extra day, the hire cost will be an extra £42.	TRUE	FALSE
The hire cost for 2 days is double the hire cost for 1 day.	TRUE	FALSE

   (b) Explain why the hire cost cannot be £124 when the booking fee is £18.
   You must show all your working. [2]

7. *(a)* Edmund needs carrots to make soup.
His two local supermarkets are *SuperM* and *FairMart*.

450 g of carrots cost 27p in *SuperM*.
The same variety of carrots cost 57p per kg in *FairMart*.

Edmund wants to buy carrots that are the best value for money.
Should he buy carrots from *SuperM* or from *FairMart*?
Give a reason for your answer.
You must show all your working. [3]

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(b) Edmund plans to use the recipe shown to make soup.

Carrot soup, serves 4 people
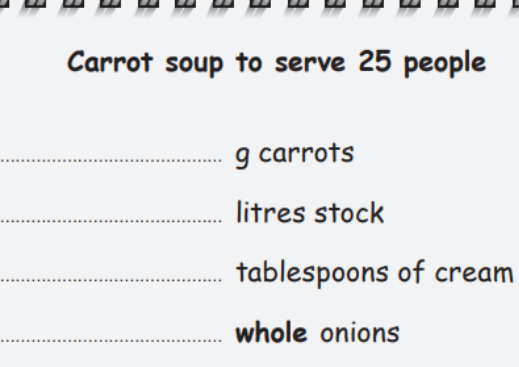
450g carrots
0·8 litres stock
4 tablespoons of cream
2 onions

He starts to write the recipe for serving 25 people.

Carrot soup to serve 25 people

.... g carrots

.... litres stock

.... tablespoons of cream

.... **whole** onions

Edmund does not want part of an onion left over.
Complete the recipe for Edmund. [3]

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8. Rhys lives in St Asaph.
He wants to video call friends in Montreal, New Delhi and Sydney.

(a) The table below shows times around the world when it is 12:30 in St Asaph.

City	Time	Day
St Asaph	12:30	Saturday
Montreal	07:30	Saturday
New Delhi	17:00	Saturday
Sydney	21:30	Saturday

(i) When it is 23:30 on Saturday in St Asaph, what time and day is it in Montreal?
Circle your answer. [1]

04:30, Sunday   07:30, Saturday   18:30, Saturday

02:30, Saturday   12:30, Saturday

(ii) When it is 01:00 on Sunday in Sydney, what time and day is it in St Asaph?
Circle your answer. [1]

16:00, Sunday   16:00, Saturday   10:00, Sunday

10:00, Saturday   06:00, Monday

(b) 1 Australian dollar (AUD) is worth £0.61.

How much is £320 worth in Australian dollars?
Give your answer to the nearest Australian dollar. [2]

£320 = ... AUD

8. *(a)* $\frac{6}{11}$ of Jenna's friends have pets.

Of these friends with pets, $\frac{2}{3}$ of them have a dog.

Use this information to answer each of the following questions.

(i) Jenna has 33 friends.
How many of her friends have a pet? [2]

(ii) What fraction of Jenna's friends have a dog? [2]

(b) 120 people were surveyed.
They were each asked which is their favourite pet: dog, cat or fish.
The numbers who answered dog, cat and fish were in the ratio 63 : 39 : 18.

Express this ratio in its simplest terms. [1]

8. Ewan is going on holiday to India.
    He has saved £450 to exchange for Indian rupees.

    (a) The exchange rate on the internet last week was £1 = 99.40 rupees.
         Had Ewan been going on holiday last week, how many rupees could he have bought?

    [2]

    (b) Ewan exchanges his money on arrival in India.
         The exchange rate is now £1 = 99.72 rupees.

         The exchange bureau only has 500 rupee notes.
         Ewan wants to buy as many rupees as possible with his £450 savings.

         How much of his £450 will Ewan spend buying rupees?
         Give your answer correct to the nearest penny.
         You must show all your working.

    [4]

9.

Ice skate hire charges

Hire any pair of ice skates for £3.25
PLUS
£2.40 for every hour or part of an hour hired*

*any minute or more into the next hour is
charged as 1 hour

(a) Bryn returns his hired ice skates after 3 hours 38 minutes.
How much will the total charge be for hiring these ice skates? [2]

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(b) Beth pays £8.05 to hire ice skates.
What is the minimum whole number of minutes that she could have hired the ice skates
for before returning them? [3]

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9. Gustav is making some scones for his sister's birthday party.

> **Recipe to make 12 scones**
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> 450g self raising flour
> 2 teaspoons of baking powder
> 75g butter
> 50g caster sugar
> 2 eggs
> 225ml milk
>
> Bake at **428°F** for 10 to 15 minutes

(a) How much self raising flour will Gustav need to make 30 scones?
Circle your answer. [1]

900g 1000g 1100g 1125g 1350g

(b) In the recipe, the temperature of the oven is given in degrees Fahrenheit, *F*.
The temperature gauge on Gustav's oven shows degrees Celsius, *C*.

The formula below is used to convert Fahrenheit into Celsius.

$$C = \frac{5F - 160}{9}$$

At what temperature should Gustav bake the scones?
Give you answer in degrees Celsius. [2]

.... °C

10. *(a)*

Railcard for 16 to 25 year olds
£30 for a year
Get $\frac{1}{3}$ **off** all your rail travel

Nerys and Eleri are sisters.
Nerys is 22 years old and Eleri is 27 years old.

The two sisters live in Holyhead.
Their aunt lives in Milford Haven.
They travel by train to visit their aunt 3 times a year.

Nerys buys a 16-25 Railcard to use for these journeys.
They buy single rail tickets for each journey.
The cost of a **single** rail ticket from Holyhead to Milford Haven is £84.50.
The journey home from Milford Haven also costs £84.50 per ticket.

In a year, how much less does Nerys pay than Eleri for the journeys to Milford Haven and back?
You must show all your working.   [5]

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(b) Cristiano is 22 years old.
He sometimes travels from Rhyl to Llandudno Junction by train.
The cost of a single rail ticket from Rhyl to Llandudno Junction is £7.80.

Nerys advises Cristiano to buy a Railcard.
Cristiano says,

> It is not worth paying £30 for the Railcard.

How many times in a year would Cristiano have to travel to make it worthwhile for him to buy a Railcard? [3]

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11.

> ### Arianna's pizzeria
>
> All pizzas £8.80 each
>
> **Special offers**
>
> Buy 1 pizza, get 1 pizza free   OR   35% off the price of every pizza

(a) Lowri orders 3 pizzas.
She wants to pay the least amount possible.
Which offer should Lowri ask for?

Buy 1 pizza, get 1 pizza free [   ]   35% off the price of every pizza [   ]

You must give the total cost of each of the offers.
You must show all your working.   [5]

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(b) Noah wants to order 10 pizzas.
Explain why 'buy 1 pizza, get 1 pizza free' would be the better of the 2 offers.
Do not use any calculations.   [1]

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12. *Organics4U* is a company based in Wales that delivers organic products.
Organics4U has 16 vehicles on the road every working day.
The company has 6 vans and 10 trucks.

Ffion has the following information for each type of vehicle.

Type of vehicle	Average distance travelled per litre (km per litre)	Average distance travelled per day (km per day)
Van	8	256
Truck	5·5	704

The fuel used by all of the 16 vehicles costs £1.10 per litre.
Use this information to calculate the **total** fuel bill for 1 working day.
You must show all your working. [6]

11. Loretta is paid in euros.
She is checking her tax bill for last year.

The tax rates last year were as follows:

- No tax on the first €3500 of earnings
- Earnings in excess of €3500 and up to €10 500: taxed at a rate of 25%
- Earnings above €10 500: taxed at a rate of 35%

Last year, Loretta's total earnings before tax were €34 500.

How much tax did Loretta pay in total?
You must show all your working. [6]

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Tax paid = € ....