Home learning- Timetable of tasks

Week beginning:28th September 2020			Class: 5/6B	Year Group: 5	
	Monday	Tuesday	Wednesday	Thursday	Friday
Objectives	SPOKEN LANGUAGE • Articulate and justify answers, arguments and opinions • Participate in discussions READING COMPREHENSION • Continue to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks • Summarise the main ideas drawn from more than one paragraph, identifying key details that support the main ideas • Identify how language, structure and presentation contribute to meaning WRITING COMPOSITION • Identify the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own • Select appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning • Assess the effectiveness of their own and others' writing • Ensure the consistent and correct use of tense throughout a piece of writing SPaG • Recognise vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms • Use the perfect form of verbs to make relationships of time and cause				
Cross curricular links and objectives	H10 (PSHE) – to recognise, predict and assess risks in different situations and decide how to manage them responsibly H23 (PSHE) – about people who are responsible for helping them stay healthy and safe; how they can help these people to keep them healthy and safe. L10 (PSHE) – to recognise the role of voluntary, community and pressure groups, especially in relation to health and wellbeing. Construct informed responses that involve thoughtful selection and	H10 (PSHE) – to recognise, predict and assess risks in different situations and decide how to manage them responsibly H23 (PSHE) – about people who are responsible for helping them stay healthy and safe; how they can help these people to keep them healthy and safe. L10 (PSHE) – to recognise the role of voluntary, community and pressure groups, especially in relation to health and wellbeing. Construct informed responses that involve thoughtful selection and	Recognises beliefs, attitudes and experiences of people in the past. Places events and people into correct periods of time. Uses vocabulary relating to the passing of time Ask and answer questions and		

	organisation of relevant historical information what jobs children did; worked in coalmines, chimney sweeps, farm hands, mill workers, domestic servants. *I can research and write about the key roles children had in Victorian Britain.*	*organisation of relevant historical information what jobs children did; worked in coalmines, chimney sweeps, farm hands, mill workers, domestic servants.* *I can research and write about the key roles children had in Victorian Britain.*	*start to select and record from information researched.* *Start to recall, select and organise historical information and start to suggest where to find information.*		
Literacy	A detailed look at the jobs that Victorian children did. The second to look at is a maid. During listening, the children are to complete a task question as they gather information.	A detailed look at the jobs that Victorian children did. The third to look at is a chimney sweep. During listening, the children are to complete a task question as they gather information.	Find out about the following three key people from Victorian times who all set out to help children. Lord Shaftsbury (1801-1885) Charles Dickens (1812-1870) Dr Barnardo (1845 – 1905)	Children are to decide which of the key people from yesterday's research they would like to write a biography about. Decide on the categories they will create (from our literacy at the beginning of last week – if they are unsure go through the powerpoint from last week to remind themselves how to do so). Think about their topic sentences. Begin to draft their biography.	Children to continue with their first draft of their biography. Reminder of the 7 power openers used in class previously.
Links to learning	http://teach.files.bbci.co.uk/schoolradio/ working_in_service_the_maid.pdf	https://www.bbc.co.uk/teach/school-radio/history-chimney-sweeps/z6k9bdm	Free research		Powerpoint designed by me and uploaded to the school website.
Objectives	Identifying how language contributes to meaning; exploring the meaning of words in context.	Identifying how language, structure and presentation contribute to meaning. Reading books that are structured in different ways and reading for a range of purposes.	Retrieve and record and present information from non-fiction. Provide reasoned justifications for their views.	Asking questions to improve their understanding Drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence	Increasing familiarity with a wide range of books. Continue to read a wide range of books.
Reading	Read through the vocabulary pdf.	Share the text "The Story of Two Very Different Childhoods" with another human at home with you! Or even your pet will do – but	Answer the questions on the attached sheet "The Story of Two	Imagine you were able to carry out interviews with Edmund Hillary and Tenzing Norgay.	Free reading!! Spend 30 mins (or more if you like) reading to

	Children to complete the sheet which is attached linking the vocabulary to two synonyms.

vocabulary studied:

infamous
dysentery
established hives
resign
ideal
conjure
beliefs
clashed
encountered | read aloud so you can practice using expression and pronunciation.

Discuss the pictures and the information with somebody – perhaps even over a video call with your grandparents?

Look at the vocab from yesterday and the synonyms you chose. Can you think of any antonyms to change the meaning of the text? | Very Different Childhoods" | Ask each of them questions about their families and their childhoods.

include questions and answers about their hobbies and interests.

How can you show their different personalities through their speech, body language and facial expressions? | yourself or out loud to another human or your pet. (My dog really loves me reading to her – she is probably waiting for me to say "treat" or "walkies" ☺)

Why not build a "reading den"? – somewhere comfy and snug where you can enjoy a peaceful time enjoying your book. |
| Links to learning | www.collinsdictionary.com/
www.kidthesaurus.com/
www.wordsmyth.net
https://media.bloomsbury.com/rep/files/Everest%20Teachers%20Notes%20Bloomsbury.pdf | | | | |
| Objectives | Subtract whole numbers with more than 4-digits | Inverse operations (addition and subtraction) | Multi-step addition and subtraction problems | Round to estimate and approximate | Multiply 4-digits by 1-digit |
| Maths | Watch the video from Oak Academy.

Complete the attached worksheets when you have finished watching the video. | Complete the worksheet – no video available for this lesson.

Read through the powerpoint slides in the resources section of the planning. | Complete the WRM worksheet and then attempt the challenge cards. | Watch the video from the Oak Academy by following the link.

Then complete the worksheet. | Watch the teacher video by following the link.

Complete the worksheet when the teacher asks you to. |
| Links to learning | https://classroom.thenational.academy/ lessons/subtracting-using-the-column-method-6xj32d | | | https://classroom.thenational.academy/ lessons/rounding-to-estimate-ccr62d | https://vimeo.com/458470803 |
| Objectives | SCIENCE

To know different materials are used for different jobs

to know the properties of a material, decide the use of the material

to know how to investigate the best materials to use for a bridge | | | Recognises beliefs, attitudes and experiences of people in the past.

Ask and answer questions and start to select and record from information researched. | |

	DT – use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose aimed at particular individuals or groups. *Understand how key events and individuals in design and technology have helped shape the world*	
Core/ Non- core subjects	DT/Science Bridge Challenge Building on work completed in school, this challenge was to be set for homework over this two weeks in my planning. Building on work in Science (materials and their properties; DT and History – Victorians)	History Two tasks linked to the work in Literacy this week. Task one, to create a diagram or mind map of the different jobs within a large Victorian house. Task two, dealing with problem solving and associated risks for the Victorian children in their jobs.
Links to learning	http://www.pbs.org/wgbh/buildingbig/lab/shapes.html https://gridclub.com/activities/brunels-britain http://www.pbs.org/wgbh/buildingbig/bridge/index.html https://gridclub.com/activities/brunel-video	The same resource links as in Literacy.
Spellings	Words from the Year 5/6 list: Especially, exaggerate, excellent, existence, explanation, familiar, foreign, forty, frequently, government, guarantee, harass	
Mathletic s	Work set according to the individual needs of the children.	

Dear 5/6B Year 5 children,

I hope that you have had another lovely weekend with your families. I hope that you enjoyed the work that I set last week. Again, I will date each piece of work so that you know when to do it. I will also date the resources so that you know which is which. The answers are at the very bottom and are TOP SECRET until you have completed the worksheet.

My cheeky dog, Bailey, is enjoying having me at home all day long and is being quite a cheeky monkey! I caught her sat at the breakfast table one morning as if she was an actual human being!! I think she was expecting some breakfast with me.

Mrs Mulhall has also been busy, taking her dog for lots of lovely walks.

Keep smiling, keep busy and soon we will see you all again.

Keep safe,

Mrs Birchenall and Mrs Mulhall

Literacy	Maths	Guided Reading
Monday 28 September BIOGRAPHIES More history to enable us to understand the reasons why our three key figures for our biographical writing needed to help children in Victorian times. **Jobs children did in Victorian Britain– THE MAID** One of the most common jobs for a girl in Victorian times was going 'into service' - which meant becoming a maid in the house of a wealthier family. Servants were common in Victorian times and a wealthy family in a large house might employ several different servants - butlers, housekeepers, cooks, gardeners and several different types of maid – while even middle class families often had one maid, called a 'maid of all work'. Girls often went into service aged just 12 or 13, sometimes younger. Girls from rural villages were in demand as maids, as it was often thought that they would work harder than children from cities. It was common for young girls to be placed in a house 30 or 40 kilometres away from their family home because it made it harder for her to run away to be with her family again.	Monday 28 September SUBTRACT WHOLE NUMBERS WITH MORE THAN 4 DIGITS Watch the video from Oak Academy by following this link: https://classroom.thenational.academy/lessons/subtracting-using-the-column-method-6xj32d Complete the attached worksheets when you have finished watching the video.	Monday 28 September Read through the vocabulary slides that I have created for you. It is after this table of instructions. Next complete the sheet I have attached below. Can you link the word and it's two synonyms? If you need a bit of help then you could use a thesaurus or a dictionary. If you do not have a thesaurus handy at home, then there are plenty available online. Try some of these: www.collinsdictionary.com/ www.kidthesaurus.com/ www.wordsmyth.net

Listen to the three audio files at:
http://teach.files.bbci.co.uk/schoolradio/working_in_service_the_maid.pdf

Episode 1 - Martha's First Day
There was no electricity supply to most houses during the Victorian era. There were no vacuum-cleaners or washing machines. What different jobs do you think needed to be done in a large Victorian house?
During listening: one question to focus on - 'What different jobs are done in the house

Episode 2 – Martha's Duties
In the Victorian era it was popular to be very strict about rules and politeness. What rules and duties do you think a Victorian maid needed to stick to?
During listening: one question to focus on - 'What rules does Martha have to follow?'

Episode 3 – Christmas for servants
In the Victorian era it was unusual for workers to be given holidays. 'How different do you think Christmas celebrations were in the Victorian era?
During listening: one question to focus on - 'How are the Christmas celebrations in the Victorian era different from Christmas celebrations today?'

Tuesday 29 September **Jobs children did in Victorian Britain– THE CHIMNEY SWEEP** The three stories in this programme focus on the life of a young chimney-sweep called Charlie. In the first two episodes Charlie tells us how he became a chimney-sweep and some of the dangers he faces, before finally being discharged from his work. In the final episode he is reunited with Maddy, Jacko and Gyp, this time at Covent Garden fruit market. While scavenging for food they meet Thomas Barnardo (the first of our key Victorian people who helped children). Listen to the three audio files at: https://www.bbc.co.uk/teach/school-radio/history-chimney-sweeps/z6k9bdm	**Tuesday 29 September** INVERSE OPERATIONS (ADDITION AND SUBTRACTION) Complete the worksheet – no teacher video today I am afraid as it is not available. However, I have included some slides to read.	**Tuesday 29 September** Share the text "The Story of Two Very Different Childhoods" with another human at home with you! Or even your pet will do – but read aloud so you can practice using expression and pronunciation. Discuss the pictures and the information with somebody – perhaps even over a video call with your grandparents? Think about your synonyms from yesterday, can you think of any antonyms? How do your antonyms change the meaning of the text?

Episode 1 – Climbing Boys
Chimneys are long, narrow, stone passages to carry smoke from coal fires up to the roof where it can escape into the sky. How could you get hurt doing this job?
During listening: one question to focus on - 'What do you need to be a good chimney sweep?'

Episode 2 – The Grand London House
The only heating in houses came from coal fires that needed chimneys to carry away the smoke. What is soot?
During listening: one question to focus on - 'What dangers did sweeps put up with?'

Episode 3 – Thomas Barnardo
Charities were very important in the Victorian era. There was little free education, medical care or housing without them. What basic services are provided for us now that did not exist in the Victorian era?
During listening: one question to focus on - 'Why does Thomas Barnado help the children?'

Remember, if you don't have a thesaurus handy, you can use the online versions I mentioned yesterday.

IF YOU ARE FINDING IT HARD TO READ THE TEXT THEN IT CAN BE FOUND USING THE FOLLOWING LINK:

https://media.bloomsbury.com/rep/files/Everest%20Teachers%20Notes%20Bloomsbury.pdf

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Wednesday 30 September

Find out about the following three key people from Victorian times who all set out to help children.

Lord Shaftsbury (1801-1885)

Charles Dickens (1812-1870)

Dr Barnardo (1845 – 1905)

Each of the men above changed history for Victorian children and therefore for you.

Wednesday 30 September
MULTI STEP ADDITION AND SUBTRACTION PROBLEMS

Complete the worksheet and then there are some challenge cards to complete. Don't worry if you don't finish all of them, I have put plenty on there so you have a choice.

Wednesday 30 September
Answer the questions on the attached sheet "The Story of Two Very Different Childhoods"

Thursday 1 October Decide which of the key people from yesterday's research you would like to write a biography about. Decide on the categories you will create (from our literacy at the beginning of last week – if you are unsure go through the powerpoint from last week to remind yourself how to do so). Think about your topic sentences. Begin to draft your biography.	**Thursday 1 October** ROUND TO ESTIMATE AND APPROXIMATE Watch the video from the Oak Academy by clicking here: https://classroom.thenational.academy/lessons/rounding-to-estimate-ccr62d Then complete the worksheet attached below.	**Thursday 1 October** Imagine you were able to carry out interviews with Edmund Hillary and Tenzing Norgay. Ask each of them questions about their families and their childhoods. include questions and answers about their hobbies and interests. How can you show their different personalities through their speech, body language and facial expressions?
Friday 2 October Continue to write your first draft of your biography. This will be an assessed piece of writing, so you will need to put in maximum effort – aim to make me amazed at your work! Once you have finished your first draft, then read it out loud so that you can spot any mistakes. Remember to use the 7 power openers. I will attach a powerpoint as a reminder with them on. Using these power openers will help you to write your sentences in different and interesting ways.	**Friday 2 October** MULTIPLY 4-DIGIT BY 1-DIGIT Watch the teacher video by clicking here: https://vimeo.com/458470803 Complete the worksheet attached below when the teacher asks you to.	**Friday 2 October** Free reading!! Spend 30 mins (or more if you like) reading to yourself or out loud to another human being or your pet. (My dog really loves me reading to her – she is probably waiting for me to say "treat" or "walkies" ☺). Why not build a reading den? Somewhere comfy and snug where you can enjoy a peaceful time enjoying your book.
History TASK 1 Having listened to more information about life for Victorian children, create a diagram or mind map of the different jobs within a large Victorian house. Three things to include in your diagram or mind map:	**Spelling** Especially, exaggerate, excellent, existence, explanation, familiar, foreign, forty, frequently, government, guarantee, harass	**DT/Science** Bridge Challenge Continue on with your Bridge Challenge. As a reminder, here is your task:

• the different jobs in the household
• extra information about rules servants had to follow, rules during celebrations and how the law applied to servants.

Challenge: can you add additional information to your diagram about the different roles of each worker? What do you think the difference is between the work of a Chambermaid and a Scullery Maid?

TASK 2
I would like you to think about the following areas, discuss them with somebody at home and then write a piece of text answering the three areas:
• the skills and dangers a sweep might be thinking about as they climb a chimney
• a problem or accident that might happen while working
• what the master sweep might do to solve the problem

Maths Code Crackers!
Just for a bit of fun ☺
I have attached a sheet at the end of the resources but before the answer section.
Have a bit of fun!!

We are challenging you to build a bridge. The full details are on your sheet (see last week's resources) – please remember you do not need to buy anything for this activity; use items from the recycling at home.

This homework will last two weeks. This will give you plenty of time to collect the items you need and to plan the best way to construct your bridge shape. Enjoy spending time thinking about our lessons in school about bridge building in DT and properties of materials from our Science. Good luck!

Slide 1

Infamous
Dysentery
Hives
Established
Resign

Ideal
Conjure
Beliefs
Clashed
Encountered

Slide 2 — infamous

in*fa*mous   adjective   \ 'in-fə-məs \

1 : having an evil reputation <an *infamous* traitor >

From the book:
...fought in the First World War in the infamous Gallipolli Campaign.

On 25th April 1915, troops of the British Empire, including several battalions/ companies of New Zealand and Australian troops, landed in multiple places along the Gallipoli coastline.
Many of the British troops were attacked by the Turkish army. They could not get ashore and were killed at sea.

Slide 3 — dysentery

From the book: ...after being shot through the nose and catching dysentery...

dys*en*tery   noun   \ 'dis-ən-ter-ē \

1 : a disease characterized by severe diarrhea with passage of mucus and blood from the bowels

Slide 4 — hives

From the book: ...he established hundreds of hives...

hive   noun   \ 'hīv \

1 a : a container for housing honeybees
b : the usually aboveground nest of bees
c : a colony of bees

established

From the book: ...he established hundreds of hives...

es*tab*lish *verb* \ is-ˈtab-lish \ 🔊

1 : to make a permanent part of a nation's laws <*establish* a constitution >
2 : to make firm or stable <*establish* a statue on its base >
3 a : to bring into existence : found <*establish* a republic > <*establish* a school >

ideal

ide*al *adjective* \ ī-ˈdē(-ə)l, ˈī-ˌdē(-ə)l \ 🔊

1 : existing only in the mind : not real <a purely *ideal* conception of society >
2 : having no flaw : perfect <*ideal* weather >

From the book: *The hills and fields of Tuakau provided an ideal playground ...*

resign

re*sign *verb* \ ri-ˈzīn \ 🔊

1 : to give up by a formal or official act <*resign* an office >
2 : to give up an office or position : quit

From the book: ...to resign from the newspaper...

conjure

From the book: *Despite being able to conjure up a good bedtime story...*

con*jure *verb* \ ˈkän-jər, ˈkən-, kən-ˈjü(ə)r \ 🔊

1 : to beg earnestly or solemnly : beseech
2 a : to call forth (as a spirit or a devil) by magical words
b : to produce as if by magic <her imagination *conjured* up a splendid scene

beliefs

From the book: ...a strict man who held very strong beliefs about how things should be done.

Perfectionist at Work

be*lief *noun* \ bə-ˈlēf \ 🔊

1 : a feeling sure that someone or something exists or is true or trustworthy <a *belief* in Santa Claus > <a *belief* in democracy >
2 : something that one thinks is true <political *beliefs* >

clashed

From the book: *Ed and his father often clashed...*

clash *verb* \ ˈklash \ 🔊

1 : to make a clash <*clashing* cymbals >
2 a : to come into conflict <pickets *clashed* with the police >
b : to not match well <our ideas *clashed* > <some colors *clash* >
--**clash*er** *noun*

encountered

what are other words for encountered?

met, confronted, battled, conflicted, struggled, faced, clashed, detect, confront, turn up

Thesaurus.plus

From the book: *Ed encountered his first real challenges at school.*

en*coun*ter *verb* \ in-ˈkaůnt-ər \ 🔊

1 : to engage in a struggle with as an enemy or rival
2 : to come upon face-to-face : meet
3 : to come upon unexpectedly <*encountered* problems >

MONDAY – MATHS

SUBTRACTING NUMBERS WITH MORE THAN 4-DIGITS

Subtract whole numbers with more than 4 digits (column method)

White Rose Maths

1

Th	H	T	O

Complete the subtractions.

a)
```
    7 3 1 5
  - 2 1 0 4
```

c)
```
    7 3 1 5
  - 5 4 2 0
```

b)
```
    7 3 1 5
  - 3 2 4 1
```

2 Complete the calculations.

a)
```
    8 4 3 4
  - 2 1 0 4
```

b)
```
  £ 8 8 2 0 0
  - £   6 1 0 0
```

c)
```
    4 6 8 3 2
  - 1 9 0 2 4
```

d)
```
    3 4 5 2 0
  -     6 7 9
```

3 A family has £22,658 in the bank.

They spend £3,600 on a holiday.

How much money do they have left?

[   ]

4 It is 10,553 miles from London to Sydney.

It is 9,929 miles from New York to Sydney.

How much further away is Sydney from London than from New York?

[   ] miles

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5 Complete the models.

a)

63,826

12,532

b)

23,000	
12,365	4,017	
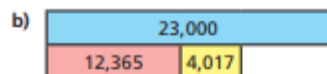
6 Mr Hall has written these subtractions on the board.

45,541 – 25,865   68,945 – 34,758

Rosie's workings

```
  2 5 8 6 5
- 4 5 5 4 1
  2 0 3 2 4
```

Whitney's workings

```
  6 8 9 4 5
- 3 4 7 5 8
  3 4 2 1 3
```

Explain the mistakes that Rosie and Whitney have made.

7 Complete the subtractions.

a) 10,004 – 9,995 = [   ]

b) 10,000 – 6,727 = [   ]

c) 15,923 – 9,998 = [   ]

How did you work this out?

Is there another method you could use?

8 Teddy and Jack are playing a computer game.

Teddy scores 55,890 points.

Jack scores 36,475 points fewer than Teddy.

a) How many points does Jack score?

[   ]

b) How many points do they have altogether?

[   ]

9 Here are some digit cards.

| 1 | 5 | 8 | 9 |
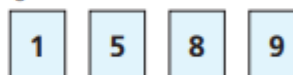
Ron makes a 4-digit number with the cards.

Eva makes a 4-digit number with the cards.

The difference between their numbers is between 1,000 and 3,000

What numbers could Ron and Eva have made?

_____

_____

_____

~ PART ONE ~

THE STORY OF TWO VERY DIFFERENT CHILDHOODS

Edmund Percival Hillary
Family Tree

PERCIVAL
AUGUSTUS   GERTRUDE
HILLARY   CLARK

JUNE   EDMUND   REXFORD
HILLARY   PERCIVAL   FLEMING
CARLILE   HILLARY   HILLARY
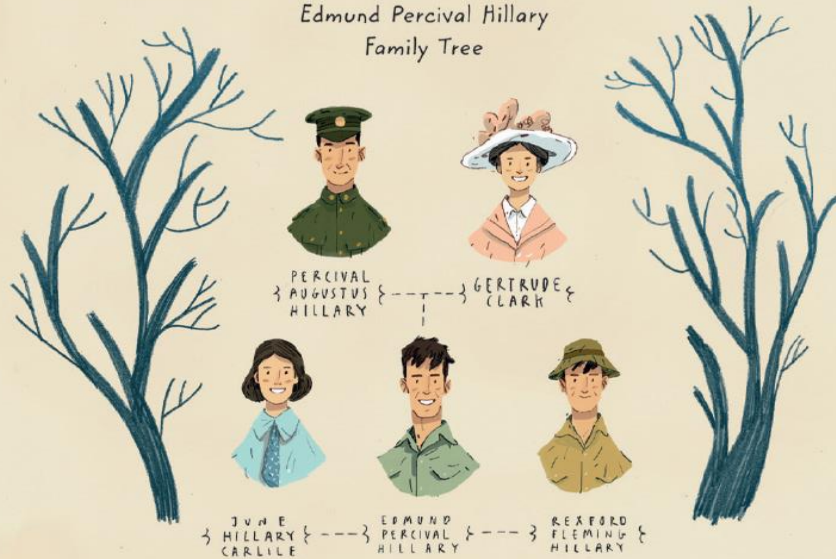
Edmund Percival Hillary was born on 20th July 1919 in Auckland, a city on New Zealand's North Island.

'Ed', as he would become known, was the second of three children. He had an elder sister called June and a younger brother called Rex.

Their father, Percy, had fought in the First World War in the infamous Gallipoli Campaign. In 1916, after being shot through the nose and catching dysentery, he was sent back home to New Zealand. Not long afterwards, he married Ed's mother, a schoolteacher called Gertrude Clark.

Percy set up a newspaper in a small town called Tuakau. But he was also very interested in beekeeping. Over time, he established hundreds of hives producing gallons upon gallons of honey, which he would then sell. Eventually, he would earn enough money to resign from the newspaper and became a full-time beekeeper.

Growing up in Tuakau

The hills and fields of Tuakau provided an ideal playground for the young Ed – who was something of a dreamer. Inspired by the adventure stories he loved to read, he would disappear for long walks, carrying a stick that he would pretend was a sword.

However, Ed's childhood was far from perfect. Despite being able to conjure up a good bedtime story, his father was a strict man who held very strong beliefs about how things should be done. Ed and his father often clashed, which resulted in Ed developing a strong and spirited character.

Ed's childhood home surrounded by beehives

Going to school

Ed encountered his first real challenges at school. As a young boy, he would walk barefoot the half-mile to Tuakau Primary School, whatever the weather. His mother's patient coaching meant that he progressed well at school, and he was able to skip a couple of years. However, this was not necessarily a good thing for Ed, who found himself by far the youngest in his class. He struggled to make friends and was a shy and quiet pupil.

When he was just 11, his parents sent him to Auckland Grammar School. Here, his classmates were a full two years older than him. Unsurprisingly, he was terrified and, once again, he found himself alone and friendless. When lunchtime arrived, he would escape to the back of the school where he would sit and watch a colony of ants busy at work. These ants – he would later say – were the only friends he really had during that bleak time.

Nevertheless, things eventually began to improve for Ed. He performed well in lessons and began to grow taller and stronger.

By the final year of his sixth form, he had begun to enjoy himself.

TUESDAY MATHS – INVERSE OPERATIONS

Write all the other calculations you can make using these three numbers.

9862 + 23 104 = 32 966

32 966 – 9862 = 23 104

32 966 – 23 104 = 9862

23 104 + 9862 = 32 966
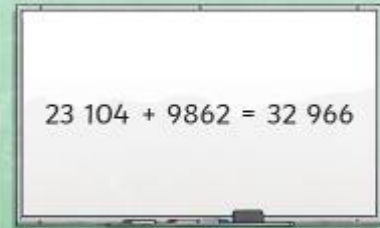
Can you work out the number in each of these?

a) I am thinking of a number. I add 7852 and then subtract 2607. I now have 32 451. What is my number?

27 206 (32 451 + 2607 = 35 058, 35 058 – 7852 = 27 206)

b) I am thinking of a number. I subtract 19 657 and then add 26 205. I now have 61 305. What is my number?

54 757 (61 305 – 26 205 = 35 100, 35 100 + 19 657 = 54 757)

c) I am thinking of a number. I add 32 981, subtract 6305 and then add 25 154. I now have 56 287. What is my number?

4457 (56 287 – 25 154 = 31 133, 31 133 + 6305 = 37 438, 37 438 – 32 981 = 4457)

Tony has written the different calculations that can be made from each original calculation.

He has made some mistakes. Can you find them all?

32 255 + 25 251 = 57 506	74 258 − 34 102 = 40 156	6721 + 25 973 = 32 694
25 251 + 32 255 = 57 506	40 156 + 34 102 = 74 258	25 973 + 32 694 = 6721
57 506 − 32 255 = 25 251	34 102 + 40 156 = 74 258	32 694 − 25 973 = 6721
32 255 − 57 506 = 25 251	34 102 − 74 258 = 40 156	32 694 − 6721 = 25 973

Tony has written the different calculations that can be made from each original calculation.

What should Tony have written?

32 255 + 25 251 = 57 506	74 258 − 34 102 = 40 156	6721 + 25 973 = 32 694
25 251 + 32 255 = 57 506	40 156 + 34 102 = 74 258	25 973 + 6721 = 32 694
57 506 − 32 255 = 25 251	34 102 + 40 156 = 74 258	32 694 − 25 973 = 6721
57 506 − 25 251 = 32 255	74 258 − 40 156 = 34 102	32 694 − 6721 = 25 973

Can you fill in the missing numbers in this arithmagon?

The two corner numbers need to be added to equal the number in the rectangle between them.

675

3217   4964

2542   6831   4289
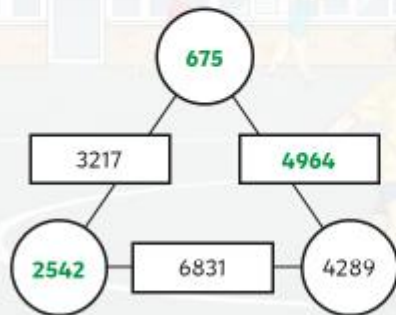
Can you find the missing numbers in this arithmagon?

The number in the rectangle is found by finding the difference between the two corner numbers either side of it.

18 627

12 684   14 833

5943   2149   3794
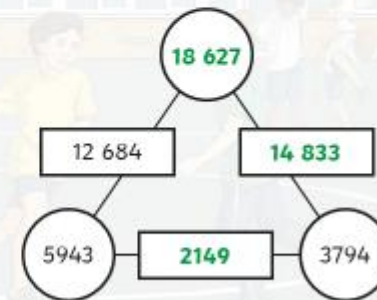
What could the numbers be to complete this arithmagon?

Find 2 possible sets of numbers using addition or difference.

7376

12 684   11 170

6869 — 10 663 — 3794

(using addition)

16 794

12 684   13 000

4110 — 316 — 3794

(using difference)

White Rose Maths

1 Ron wants to check this addition calculation.

$$320 + 719 = 1,039$$

Circle the subtractions that can be used to check Ron's addition.

$1,039 - 719$ $320 - 1,039$

$719 - 320$ $1,039 - 320$

2 Dora wants to check this subtraction calculation.

$$4,096 - 2,356 = 1,740$$

Circle the addition that can be used to check Dora's subtraction.

$4,096 + 2,356$ $4,096 + 1,740$

$1,740 + 2,356$ $1,740 + 4,096$

3 Use an inverse operation to check these calculations.

a)

	1	3	6	0
+	2	9	7	3
	4	3	3	3

b)

	8	2	6	4
−	3	1	4	2
	5	1	2	2

4 Tommy works out 12,350 + 7,903 incorrectly.

	1	2	3	5	0
+		7	9	0	3
	9	1	3	8	0

Tommy checks his calculation using the same addition.

Is this a good idea? Talk about it with a partner.

What calculation should he do? Correct Tommy's answer.

5 Match the inverse calculations.

2,482 + 6,428 = 8,912		5,271 + 4,212 = 9,483
5,984 − 3,172 = 2,812		8,912 − 6,428 = 2,482
9,483 − 5,271 = 4,212		8,912 − 5,271 = 3,641
8,912 = 3,641 + 5,271		5,984 = 3,172 + 2,812

6 Complete the calculations.

Use inverse operations to check your answers.

a) 763 + 4,072 =
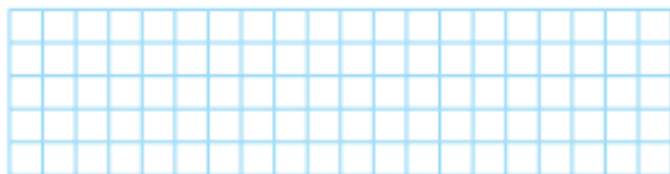
b) 8,711 − 1,053 =

c) 2,351 + 14,706 =
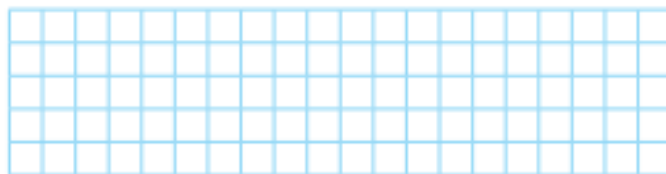
7 Alex thinks of a number.

When I add 4,550 to my number I get 7,460

What number did Alex start with?

8 Here is a bar model.

| 20,000 | | |
| 3,729 | | 8,451 |
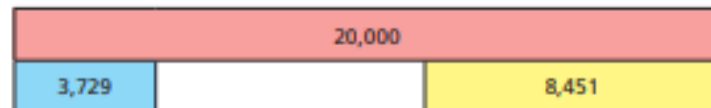
Think of two different ways that you can find the missing part.

What is the missing part?

- In what country was Edmund Percival Hillary born?

- How many brothers and sisters did he have?

- What can you **infer** about 'young Ed's' personality?
  Pick out key words and phrases that support your ideas.

- What signs can you find in the text on page 9 to indicate that Edmund
  Hillary might one day become a climber and an adventurer?

- Now, look at **pages 14–15**. In what country was Tenzing Norgay born?

- How many brothers and sisters did Tenzing Norgay have?

- Why was Tenzing considered to be 'a lucky baby'?

- What was Tenzing's dream? How long had he had his dream?

- Can you identify the **differences** between Edmund and
  Tenzing's childhoods?

Multi-step addition and subtraction problems

1 Eva is reading a book before bedtime.

On Monday she reads 38 pages.

On Tuesday she reads 6 pages more than she did on Monday.

a) How many pages does she read on Tuesday?

b) How many pages does she read altogether on Monday and Tuesday?

c) There are 123 pages in the book altogether.

How many pages does Eva have left to read?

2 Here are two number cards.

800	?

The sum of the two cards is 2,900

What is the difference between the two cards?

3 Mo has £1,000 to spend. He buys a TV and a games console.

£349   £199   £479

Does Mo have enough money left to buy the phone? _____

Show your workings.

4 Two families each have £1,800

The table shows how much they need to spend.

	The Websters	The Changs
Housing	£465	£550
Food	£420	£380
Bills	£120	£135

Which family has the most money left?

_____

How much more money do they have?

5 There are 15,600 people at a concert.

There are 9,050 adults.

The rest are children.

How many more adults than children are there?

[   ]

6 Jack, Whitney and Amir are counting their sticker collections.

I have twice as many stickers as Whitney.

Jack

I have 100 stickers fewer than Whitney.

Amir

They have 900 stickers altogether.

How many stickers do they each have?

Jack has [   ] stickers.

Amir has [   ] stickers.

Whitney has [   ] stickers.

7 Two numbers have a difference of 1,200 and a total of 6,484

What are the two numbers?

[   ] and [   ]

8 Three 4-digit numbers add together to make 10,000

One of the numbers is 2,560

Complete the sentences to describe the other numbers.

The total of the two numbers must be [   ]

The two numbers could be [   ] and [   ]

One of the numbers cannot be greater than [   ]

Write your own problem like this for a partner to solve.

_____

_____

_____

Maths Mastery

Addition and Subtraction Multistep Problems
Challenge Cards

twinkl

1

On Sunday, Jacob spent 86 minutes on his maths homework and 37 minutes reading. On Tuesday, he spent 69 minutes on his project.

What calculations will you use to find the difference between the time spent on homework on Sunday and Tuesday?

2

Jacob received £25.90 for his birthday. He spent £8.99 on a book and £7.50 on a computer game. Show three different calculation steps you could use to find how much money he has left.

3

At the beginning of the day, a grocer has 239 apples. He receives another 144 from his supplier and sells 307 during the day.

Khalid calculates how many apples the grocer has by the end of the day:

307 − 239 = 68, 68 + 144 = 212 apples left.
Explain the mistake Khalid has made.

Come up with your own word problem with a mistake for a partner to spot.

4
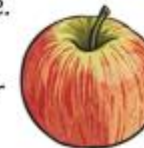
Alisha has £18.35 in her purse. Her father gives her £5 pocket money. She buys a book for £7.99 and a bag for £13.49. How much will she have left?

Naomi says Alisha has £1.87 left. Jack says Alisha has £3.13 left. Who is correct and what mistakes have been made?

What other errors might be made?

5

A pizza shop makes 176 pizza bases before opening. Over the evening, they sell 247 pizzas. During the evening, they make another 80 pizza bases. How many pizza bases will be left at the end of the evening?

Bailey says they have 151 pizza bases left.

Ashleigh says they have 9 pizza bases left.

Who is correct and what mistakes have been made? What other errors might be made?

6

Write a word problem for which this calculation is used to find the answer.

$$456 + 237 - 598 = 95$$

Check your problem with a partner.
What mistakes might someone make when trying to solve the problem?

7

Write a word problem for which this calculation is used to find the answer.

$$£9.67 + £8.22 = £17.89$$
$$£3.49 + £5.75 = £9.24$$
$$£17.89 - £9.24 = £8.65$$

Check your problem with a partner.
What mistakes might someone make when trying to solve the problem?

Pretend you are able to carry out interviews with Edmund Hillary and Tenzing Norgay.

Ask each of them some questions about their families and their childhoods. Include questions and answers about their hobbies and interests.

Extension: How can you show their different personalities through their speech, body language and facial expressions?

Round to estimate and approximate

1 Rosie is working out 2,937 + 1,870

Rosie rounds each number to the nearest 1,000 to estimate the answer.

Complete the sentences.

2,937 rounded to the nearest 1,000 is ☐

1,870 rounded to the nearest 1,000 is ☐

Rosie's estimate for the answer is

☐ + ☐ = ☐

Complete the column addition to work out the actual answer.

```
    2  9  3  7
+   1  8  7  0
  _____
```

The actual answer is ☐

2 Round each number to the nearest 10,000 to estimate the answer to the calculations.

a) 12,063 + 29,580   ☐ + ☐ = ☐

b) 47,640 – 9,485   ☐ – ☐ = ☐

3 Annie works out 7,320 + 912

The answer is 16,440

Use approximations to show that Annie is incorrect.

_____

_____

4 Complete the calculations.
Use approximations to check your answers.

a) 3,845 km + 7,006 km = ☐

b) 873 + 9,618 = ☐

c) 79,382 – 8,716 = ☐

d) £12,005 + £3,978 – £6,172 = ☐

5 The table shows the number of people of different ages living in three towns.

	Town A	Town B	Town C
Under 16	3,765	8,283	10,301
16 to 65	35,835	14,100	24,554
Over 65	1,949	9,821	656

Estimate which town has got the greatest population.

Town ____ has the greatest population.

6 Are these statements correct? How do you know?

a) 29,999 – 9,999 = 30,000 – 10,000

_____

_____

b) 17,550 + 10,570 > 17,550 + 9,985

_____

_____

c) 17,990 + 75,980 – 17,990 = 12,975 + 75,980 – 12,975

_____

_____

7 Mo has made a mistake with this calculation.

$$
\begin{array}{r}
{}^{6}\!\!\not{1}\,{}^{13}\!\!\not{3}\,{}^{12}\!\!\not{3}\,{}^{12} \\
-\quad 8\ 4\ 8\ 7 \\
\hline
1\ 8\ 9\ 4\ 5
\end{array}
$$

Use rounding and approximating to show how you know.

_____

_____

8 Mr Khan writes this question on the board.

7,395 – 711

Dexter's estimate is 7,000 – 1,000 = 6,000
Whitney's estimate is 7,400 – 700 = 6,700

Whose estimate do you agree with?   _____
Explain your answer.

_____

_____

Work out the actual answer.
Whose estimate was the closest?   _____
Talk about it with a partner.

Multiply 4-digits by 1-digit

1 Complete the sentences to describe the multiplication.

Th	H	T	O

There are ☐ ones altogether.

There are ☐ tens altogether.

There are ☐ hundreds altogether.

There are ☐ thousands altogether.

2,213 × 3 = ☐

2 Complete the multiplication.

Use the place value chart to help you.

Th	H	T	O

		2	1	0	2
×					4

3 A football stadium holds 2,214 people.

The stadium is full for 4 matches in a row.

What was the attendance for all 4 matches?

Th	H	T	O

		2	2	1	4
×					4

The attendance for all 4 matches was ☐

4 Nijah is calculating 2,430 × 3

She makes this place value chart to help her.

Th	H	T	O

She gets the answer 729

What mistake has Nijah made?

_____

_____

What is the correct answer? ☐

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5 Complete the multiplications.

a) 3,126 × 3 = ☐   c) 4,132 × 6 = ☐

b) 4,812 × 2 = ☐   d) 1,502 × 5 = ☐

6 Ron is working out 7,423 × 0

```
    7  4  2  3
×            0
  _____
    7  4  2  3
```

The answer is 7,423

Do you agree with Ron? _____

Did Ron have to use a column method? Is there a quicker way?

7 Work out these multiplications.

2,846 × 2 = ☐

2,846 × 4 = ☐

2,846 × 8 = ☐

What do you notice about the answers?

8

248 × 10 = 2,480

Without using the formal method, how could you use this fact to calculate 248 × 9?

_____

_____

Check your answer using the formal method.

Which method was easier?

9 Use each digit card once to write a multiplication.

1 2 3 4 5

×
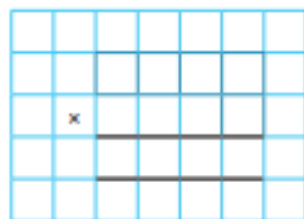
How many different products can you find?

_____

_____

What is the closest product to 8,000? ☐

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A BIT OF FUN ON PLACE VALUE

Talk Like a Pirate Day (19 September)

"Ahoy, maties!" 19 September is International Talk Like a Pirate Day. The day was created by John Baur and Mark Summers in 1995. At first, this was a joke between the two men. In 2002, the media began to cover the comical day and it gained a following. Some people who celebrate International Talk Like a Pirate Day raise money for charities such as Childhood Cancer Support and Marie Curie Cancer Care.

Solve each question below. Then use the key to find the answer to the joke. Letters can be used more than once.

1. 7,999 + 10 =

2. MMDCXXIX =

3. Round 1,826 to the nearest 10.

4. Which is the biggest?
87,300   83,700   78,300
38,700   73,800

5. 20,000 + 5,300 + 20 + 7 =

6. Which is the mistake in this sequence? 864,193   764,193
664,193   554,193   464,193

7. Which is the smallest?
17,010   17,100   17,011
17,110   17,111

8. Round 763,294 to the nearest 10,000.

9. What's the difference between -15 and 49?

10. Round 87,274 to the nearest 100.

Did you know?
The word 'pirate' is taken from the Latin word 'pirata' which means sailor or sea robber. It is also taken from the Greek word 'peirates' which means 'ones who attacks ships'.

11. MDCCCXXX =

12. What is the 4th number in this sequence?
7,229   7,129   7,019

13. -23 + 100 =

A	B	C	D	E	F	G	H	I	J	K	L	M
8,009	83,700	6,919	837	1,830	17,011	87,200	70,000	1,330	77	2,529	938	128

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2,629	554,193	25,237	34	87,300	760,000	123	17,010	25,227	64	7,010	1,820	128

What lies at the bottom of the ocean and twitches?

1 __   2 3 4 5 6 7 8 __   9 10 11 12 13 __

ANSWERS

Question	Answer
| 1 | a)<br>```
  7 3 1 5
-  2 1 0 4
  5 2 1 1
```<br>b)<br>```
  7 ²3 ¹1 5
-  3 2 4 1
  4 0 7 4
```<br>c)<br>```
 ⁶7 ¹²3 ¹1 5
-   5 4 2 0
   1 8 9 5
``` |
| 2 | a)<br>```
  8 4 3 4
-  2 1 0 4
  6 3 3 0
```<br>b)<br>```
  £ 8 8 2 0 0
- £   6 1 0 0
  £ 8 2 1 0 0
```<br>c)<br>```
 ⁵4 ⁶6 8 ²3 ¹2
-  1 9 0 2 4
  2 7 8 0 8
```<br>d)<br>```
 3 ⁴4 ¹⁴5 ¹2 ¹0
-     6 7 9
 3 3 8 4 1
``` |
| 3 | £19,058 |
| 4 | 624 miles |

Question	Answer
5	a) 63,826 12,532 51,294 b) 23,000 12,365 4,017 6,618
6	Rosie has written the numbers the wrong way round and then found the difference between the digits in each column. Whitney has found the difference between the digits in each column, instead of taking the second digit from the first digit, exchanging where necessary.
7	a) 9 b) 3,273 c) 5,925 Work out 15,923 – 10,000 and add 2 Work out 15,925 – 10,000 Count up from 9,998 to 15,923
8	a) 19,415 b) 75,305
9	multiple possible answers, e.g.: 5,189 and 8,159 5,198 and 8,195 8,159 and 9,518 8,591 and 9,815

Question	Answer
1	1,639 − 719 (circled) 326 − 1,039 719 − 320 1,039 − 320 (circled)
2	4,096 + 2,356 (circled) 4,096 + 1,740 1,740 + 2,356 (circled) 1,740 + 4,096
3	a) and b) column addition and subtraction methods shown
4	Tommy should check his calculation using a subtraction. 91,380 − 12,350 or 91,380 − 7,903 20,253
5	matching pairs: 2,662 + 6,426 = 8,912 → 8,912 − 6,426 = 2,482 5,884 − 3,172 = 2,912 → 8,912 − 5,271 = 3,641 9,483 − 5,271 = 4,212 → 9,271 + 4,212 = 9,483 8,912 = 3,641 = 5,271 → 5,884 = 3,172 + 2,832
6	a) 4,835 b) 7,658 c) 17,057
7	2,910
8	possible methods include: Add 3,729 and 8,451, then subtract this total from 20,000 Subtract 3,729 from 20,000, then subtract 8,451 from the answer. 7,820

Question	Answer
1	a) 44 b) 82 c) 41
2	1,300
3	No. 349 + 199 + 479 = 1,027 and 1,027 < 1,000
4	the Websters £60
5	2,500
6	Jack has **500** stickers. Amir has **150** stickers. Whitney has **250** stickers.
7	2,642 and 3,842
8	The total of the two numbers must be **7,440** e.g. The two numbers could be **2,000** and **5,440** One of the numbers cannot be greater than **6,440**

Answers

1. $86 + 37 = 123$ minutes on Sunday
   $123 - 69 = 54$ minutes difference

2. $£25.90 - £8.99 = £16.91$
   $£16.91 - £7.50 = £9.41$
   $£25.90 - £7.50 = £18.40$
   $£18.40 - £8.99 = £9.41$
   $£8.99 + £7.50 = £16.49$
   $£25.90 - £16.49 = £9.41$

3. Khalid began by subtracting the number of apples at the beginning of the day from the number of apples sold. The answer of 68 is then the number of the apples delivered that day that were sold, so the answer would come from $144 - 68 = 76$.

   Another way would be to add the number of apples at the beginning of the day to the apples delivered: $239 + 144 = 383$. Then subtract the number sold from this total: $383 - 307 = 76$

4. Naomi is correct: $£18.35 + £5 - £7.99 - £13.49$
   Jack is incorrect: $£7.99 + £13.49 - £18.35$. He has missed out the £5 pocket money and subtracted the money in the purse from the amount spent.

5. Ashleigh is correct: $176 + 80 - 247 = 9$
   Bailey is incorrect: $247 + 80 - 176 = 151$. He has added the number sold to the number of extra bases then subtracted the number of bases they had at the start of the evening.

6. Answers will vary

7. Answers will vary

Question	Answer

1	2,937 rounded to the nearest 1,000 is **3,000**.
	 1,870 rounded to the nearest 1,000 is **2,000**.
	 Rosie's estimate for the answer is
	 3,000 + 2,000 = 5000
	
	 ``
	   3 9 3 7
	 + 1 8 7 0
	   4 8 0 7
	 ``
	
	 The actual answer is **4807**

2	a) 10,000 + 30,000 = 40,000 b) 50,000 − 10,000 = 40,000
3	7,000 + 1,000 = 8,000 This is much smaller than Annie's answer.

4	a) 10,851 km
	   4,000 + 7,000 = 11,000
	 b) 10,491
	   1,000 + 10,000 = 11,000
	 c) 70,666
	   80,000 − 10,000 = 70,000
	 d) £9,811
	   12,000 + 4,000 − 6,000 = 10,000

5	Town A has the greatest population.
6	a) Yes, because 1 has been added to each number so the difference is the same. b) Yes, because 17,550 is on both sides and 10,570 > 9,985 c) Yes, because on both sides the first and third numbers are the same and one is subtracted from the other, and the second number is the same on both sides.
7	17,000 − 8,000 = 9,000, which is much less than Mo's answer.
8	Both estimates are correct, but the have rounded to different numbers. Dexter has rounded to the nearest 1,000 and Whitney has rounded to the nearest 100. 6,684 Whitney Rounding to the nearest 1,000 gives an easier calculation for the estimate, but rounding to the nearest 100 gives a more accurate estimate.

1 Complete the sentences to describe the multiplication.

Th	H	T	O
⬤⬤	⬤⬤	⬤	⬤⬤⬤
⬤⬤	⬤⬤	⬤	⬤⬤⬤
⬤⬤	⬤⬤	⬤	⬤⬤⬤

There are ☐9☐ ones altogether.

There are ☐3☐ tens altogether.

There are ☐6☐ hundreds altogether.

There are ☐6☐ thousands altogether.

2,213 × 3 = ☐6,639☐

2 Complete the multiplication.

Use the place value chart to help you.

Th	H	T	O
⬤⬤	⬤		⬤⬤
⬤⬤	⬤		⬤⬤
⬤⬤	⬤		⬤⬤
⬤⬤	⬤		⬤⬤

		2	1	0	2
	×				4
		8	4	0	8

3 A football stadium holds 2,214 people.

The stadium is full for 4 matches in a row.

What was the attendance for all 4 matches?

Th	H	T	O
⬤⬤	⬤⬤	⬤	⬤⬤ ⬤⬤
⬤⬤	⬤⬤	⬤	⬤⬤ ⬤⬤
⬤⬤	⬤⬤	⬤	⬤⬤ ⬤⬤
⬤⬤	⬤⬤	⬤	⬤⬤ ⬤⬤

		2	2	1	4
	×				4
		8	8	5	6
				1	

The attendance for all 4 matches was ☐8,856☐

4 Nijah is calculating 2,430 × 3

She makes this place value chart to help her.

Th	H	T	O
	⬤⬤	⬤⬤⬤⬤	⬤⬤
	⬤⬤	⬤⬤⬤⬤	⬤
	⬤⬤	⬤⬤⬤⬤	⬤⬤

She gets the answer 729

What mistake has Nijah made?

She hasn't put her counters in the correct column.

What is the correct answer? ☐7,290☐

5 Complete the multiplications.

a) $3,126 \times 3 =$ 9,378

c) $4,132 \times 6 =$ 24,792

b) $4,812 \times 2 =$ 9,624

d) $1,502 \times 5 =$ 7,510

6 Ron is working out $7,423 \times 0$

```
    7  4  2  3
 ×           0
    7  4  2  3
```

The answer is 7,423

Do you agree with Ron? __No__

Did Ron have to use a column method? Is there a quicker way?

7 Work out these multiplications.

$2,846 \times 2 =$ 5,692

$2,846 \times 4 =$ 11,384

$2,846 \times 8 =$ 22,768

What do you notice about the answers?

8

$$248 \times 10 = 2,480$$

Without using the formal method, how could you use this fact to calculate 248×9?

$248 \times 9 = 248 \times 10 - 248 \times 1 = 2,480 - 248, = 2,232$

Check your answer using the formal method.

```
    2  4  8
 ×        9
    2  2  3  2
       4  7
```

Which method was easier?

9 Use each digit card once to write a multiplication.

| 1 | 2 | 3 | 4 | 5 |

How many different products can you find?

Various answers.

What is the closest product to 8,000? 8,270

1. 7,999 + 10 =   8,009   A

2. MMDCXXIX =   2,629   N

3. Round 1,826 to the nearest 10.   1,830   E

4. Which is the biggest? 87,300   83,700   78,300   38,700   87,300   R
    73,800

5. 20,000 + 5,300 + 20 + 7 =   25,327   V

6. Which is the mistake in this sequence? 864,193   764,193
    664,193   554,193   464,193   554,193   O

7. Which is the smallest? 17,010   17,100   17,011   17,110   17,010   U
    17,111

8. Round 763,294 to the nearest 10,000.   760,000   S

9. What's the difference between -15 and 49?   64   W

10. Round 87,274 to the nearest 100.   87,300   R

11. MDCCCXXX =   1,830   E

12. What is the 4th number in this sequence? 7,229   7,129   6,919   C
    7,019

13. -23 + 100 =   77   K

What lies at the bottom of the ocean and twitches?

A nervous wreck.