



Dear Beijing and Rome classes,

Just a quick message to let you know that I am healthy and still working hard to bring you some exciting activities. I have seen some of you have been on Purplemash and would love to see more of your work. If you look on your set tasks I have given you some games to complete and would absolutely love to see some of your design work for houses that we were working on before I went off poorly.

Mr Gregory and I have been chatting and one of the tasks we were going to do at school as part of our Space topic was to measure the length of shadows at various points throughout the day to show how the sun changes position in the sky. It would be great if you could go outside at 5 different times during the day (whilst it is sunny) and standing the same place measure the length of your shadow and note the position of your shadow - does it change. If you don't have a tape measure you could use a pile of books to measure or just be as inventive as you like. Record the different lengths of your shadow and then you could create a bar chart or line graph to show the results. Your y axis could be length of shadow and your x axis could be times in which you measured the shadow. When you have completed this you could email me some photos of your work. Also have a think about what you have learnt by doing this activity.

Take care and keep reading - remember my lecture on improving your reading speed by reading more and challenging yourselves!

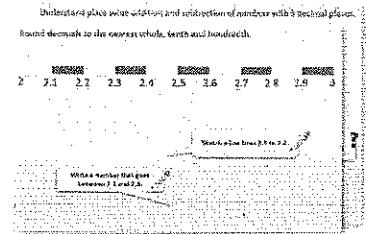
Mrs Dennis

Year 5: Week 1, Day 1

Mental addition and subtraction strategies

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.

Place value addition and subtraction	
1. $4.550 + 0.02$	2. $4.615 + 0.03$
3. $4.550 - 0.054$	4. $4.635 - 0.07$
5. $0.211 + 0.01$	6. $0.221 + 0.010$
7. $0.701 + 0.017$	8. $0.546 + 0.274$
9. $0.846 - 0.14$	10. $0.546 - 0.013$
11. $0.846 - 0.74$	12. $0.746 - 0.023$

3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?

Discover the decimal

What is the decimal?

Place the decimal point in the correct position.

1. The decimal point is in the correct position.

2. The decimal point is in the correct position.

3. The decimal point is in the correct position.

4. The decimal point is in the correct position.

5. The decimal point is in the correct position.

6. The decimal point is in the correct position.

7. The decimal point is in the correct position.

8. The decimal point is in the correct position.

9. The decimal point is in the correct position.

10. The decimal point is in the correct position.

11. The decimal point is in the correct position.

12. The decimal point is in the correct position.

13. The decimal point is in the correct position.

14. The decimal point is in the correct position.

15. The decimal point is in the correct position.

16. The decimal point is in the correct position.

17. The decimal point is in the correct position.

18. The decimal point is in the correct position.

19. The decimal point is in the correct position.

20. The decimal point is in the correct position.

0.001s

4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!

Identify the value of the '4' in the following numbers:

(a) 3.407

(b) 4.821

(c) 0.043

(d) 5.204

(e) 48.739

How many times must Dan multiply 0.048 by 10 to get 48,000?

What number is one hundred times smaller than 0.4?

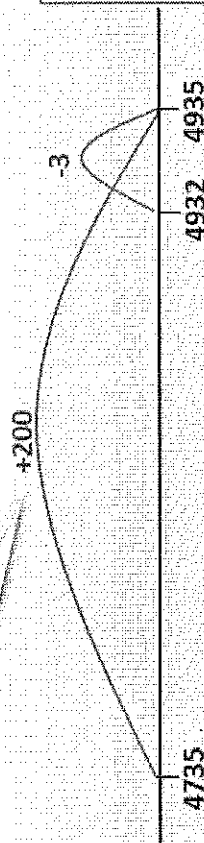
Learning Reminders

Use place value to add and subtract; add and subtract near multiples of 100 and 1000.

If we can use place value to add 200 to 4735, we can use this answer to add 197 to 4735.

Add 200 to 4735 and write the answer. Now use this answer to add 197 to 4735.

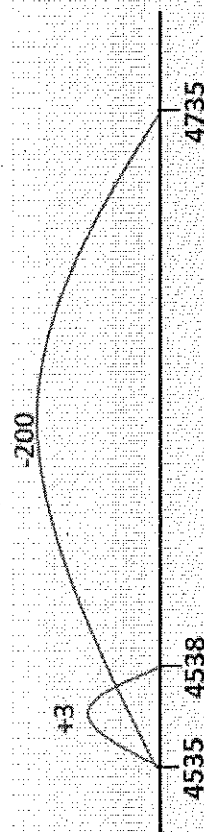
197 is a 'nearly' number - it's nearly a multiple of 100. This 'add and adjust' strategy makes adding near-multiples of 100 a bit more straightforward...



Use place value to add and subtract; add and subtract near multiples of 100 and 1000.

This works for subtraction too... Subtract 200 from 4735 and write the answer. Then use this answer to subtract 197 from 4735.

This time we 'subtract and adjust' to make subtracting a near-multiple of 100 a bit more straightforward...

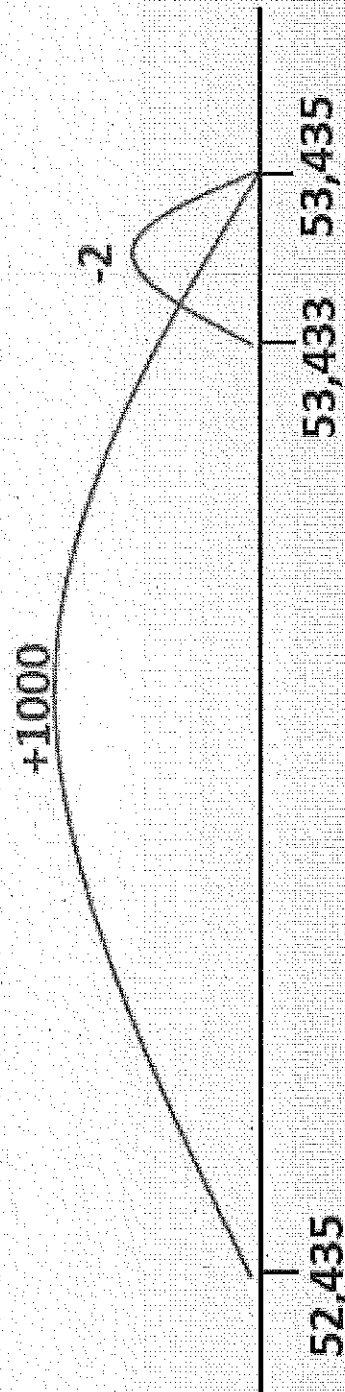


Learning Reminders

Use place value to add and subtract near multiples of 100, 1000 and 10,000.

The 'add and adjust' strategy also works for near-multiples of 1000.

What is $52,435 + 998$...?
Add 1000 and write the answer.
Now use this answer to add 998 to 52,435.



Learning Reminders

Use place value to add and subtract; add and subtract near multiples of 100, 1000 and 10,000.

Try these...

52,435

Add 2000 and write the answer. Use this answer to add 1995 to 52,435.

Subtract 2000 and write the answer. Now use this answer to subtract 1995 from 52,435.

Add 300 and write the answer. Use this answer to add 297 to 52,435.

Subtract 300 and write the answer. Now use this answer to subtract 297 from 52,435.

Practice Sheet Mild

Mental addition and subtraction

1. $4580 + 205$

6. $4783 - 480$

11. $7845 - 1999$

2. $8040 + 508$

7. $8536 - 2004$

12. $3425 + 400$

3. $3452 + 2005$

8. $4563 + 2000$

13. $3425 + 399$

4. $4293 + 4300$

9. $4563 + 1999$

14. $7845 - 200$

5. $8572 - 502$

10. $7845 - 2000$

15. $7845 - 199$

Challenge

Zoe thinks of a number and adds 2988. She then subtracts 1100. Her answer is 8888. What number did she start with?

Practice Sheet Hot
Mental addition and subtraction

1. $64,378 + 3001$

6. $74,874 + 2999$

2. $78,745 - 21,000$

7. $43,473 + 398$

3. $45,063 + 2300$

8. $87,532 - 29,999$

4. $78,462 - 8002$

9. $63,467 - 1998$

5. $45,364 + 19,999$

10. $54,879 - 495$

Challenge

Mia thinks of a number and subtracts 5555. She then adds 1010. Her answer is 5454. What number did she start with?

Extra Practice Sheet for All
Mental addition and subtraction

1. $3002 + 450$ 2. $9784 - 704$ 3. $4723 + 402$ 4. $2538 + 2001$

5. $9826 - 803$ 6. $4782 - 502$ 7. $3782 + 200$ 8. $3782 + 198$

9. $4658 - 100$ 10. $4658 - 97$ 11. $3478 + 1000$ 12. $3478 + 999$

13. $5298 - 1000$ 14. $5298 - 999$ 15. $4578 + 321$ 16. $8734 - 6031$

17. $23,472 - 2222$ 18. $45,310 + 3409$ 19. $8345 + 397$ 20. $7935 - 298$

21. $3458 + 1997$ 22. $9768 - 2995$ 23. $45,237 + 3900$ 24. $57,345 - 2998$

Challenge

Start with 9999. Subtract 2424. Add 1313. What pattern do you get? How many times can you do this before you reach 0?

Practice Sheet Answers

Mental addition and subtraction (mild)

- | | | |
|-------------------------|--------------------------|--------------------------|
| 1. $4580 + 205 = 4785$ | 6. $4783 - 480 = 4303$ | 11. $7845 - 1999 = 5846$ |
| 2. $8040 + 508 = 8548$ | 7. $8536 - 2004 = 6532$ | 12. $3425 + 400 = 3825$ |
| 3. $3452 + 2005 = 5457$ | 8. $4563 + 2000 = 6563$ | 13. $3425 + 399 = 3824$ |
| 4. $4293 + 4300 = 8593$ | 9. $4563 + 1999 = 6562$ | 14. $7845 - 200 = 7645$ |
| 5. $8572 - 502 = 8070$ | 10. $7845 - 2000 = 5845$ | 15. $7845 - 199 = 7646$ |

Challenge

Zoe started with 7000.

Mental addition and subtraction (hot)

- | | |
|-------------------------------|-------------------------------|
| 1. $64,378 + 3001 = 67,379$ | 6. $74,874 + 2999 = 77,873$ |
| 2. $78,745 - 21,000 = 57,745$ | 7. $43,473 + 398 = 43,871$ |
| 3. $45,063 + 2300 = 47,363$ | 8. $87,532 - 29,999 = 57,533$ |
| 4. $78,462 - 8002 = 70,460$ | 9. $63,467 - 1998 = 61,469$ |
| 5. $45,364 + 19,999 = 65,363$ | 10. $54,879 - 495 = 54,384$ |

Challenge

Mia started with 9999.

Practice Sheet Answers

Mental addition and subtraction (extra practice for all)

1. $3002 + 450 = 3452$
2. $9784 - 704 = 9080$
3. $4723 + 402 = 5125$
4. $2538 + 2001 = 4539$
5. $9826 - 803 = 9023$
6. $4782 - 502 = 4280$
7. $3782 + 200 = 3982$
8. $3782 + 198 = 3980$
9. $4658 - 100 = 4558$
10. $4658 - 97 = 4561$
11. $3478 + 1000 = 4478$
12. $3478 + 999 = 4477$
13. $5298 - 1000 = 4298$
14. $5298 - 999 = 4299$
15. $4578 + 321 = 4899$
16. $8734 - 6031 = 2703$
17. $23,472 - 2222 = 21,250$
18. $45,310 + 3409 = 48,719$
19. $8345 + 397 = 8742$
20. $7935 - 298 = 7637$
21. $3458 + 1997 = 5455$
22. $9768 - 2995 = 6773$
23. $45,237 + 3900 = 49,137$
24. $57,345 - 2998 = 54,347$

Challenge

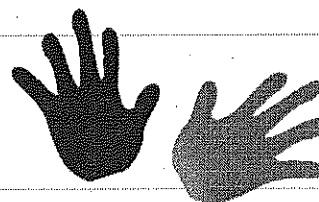
When subtracting 2424 and adding 1313, you are in fact subtracting 1111 each time. You can do this nine times, before you reach 0.

A Bit Stuck? Digit dance

Work in pairs

Things you will need:

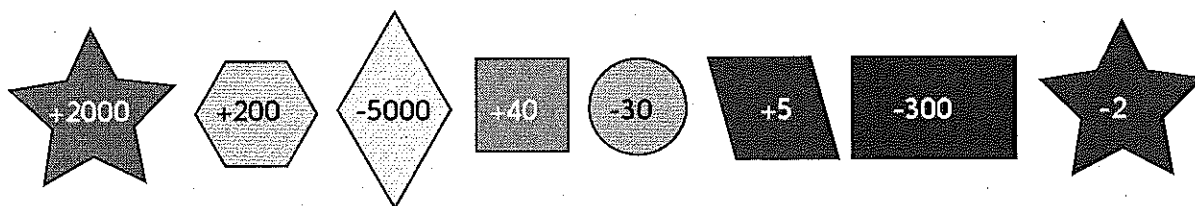
- A pencil



What to do:

- Start with 7654.
- Choose a number to add or subtract from those below. Tick it off. Write down the answer.
- Choose a different number to add or subtract from this new number. Tick it off.
- Keep going until you have added and subtracted every number.
- You can add and subtract the numbers in any order you want, BUT choose a different order to your partner.
- Keep a record of your answers and what you have added or subtracted each time so that you can check your work later.
- Compare your answer with your partner's. Are they the same? Should they be? Why/why not? Do you need to check your work?
- What do you notice about the digits in your answer compared with the digits in the starting number?

7654
+ 200
7854
- 2000
5854
...



S-t-r-e-t-c-h:

Write a chain of additions and subtractions that will get you back to the starting number.

Learning outcomes:

- I can use place value to add and subtract multiples of 1, 10, 100 and 1000 to and from 4-digit numbers (not crossing 10s, 100s or 1000s).
- I am beginning to solve problems using place value.

Check your understanding

Questions

Predict what the ones digit of your answer will be if you carry out the following sequence:

Start with 98,765.

Subtract 9999

Subtract 999

Subtract 99

Subtract 9

What number are you left with?

What number must I add to 9998 to get 33,454?

What mistake has Tom made in this subtraction?

$6734 - 997 = 5731$

Fold here to hide answers:

Check your understanding

Answers

Predict what the ones digit of your answer will be if you carry out the following sequence:

Start with 98,765.

Subtract 9999

Subtract 999

Subtract 99

Subtract 9

What number are you left with? 87,659. I can predict that the answer will end in 9. Each of the subtractions can be done by subtracting 1 extra, e.g. 10,000 rather than 9999, 1000 rather than 999 etc. There are 4 subtractions to be done in this way, so 4 must be added on to compensate.

What number must I add to 9998 to get 33,454? 23,456. Subtract 9998 from 33,454 to find answer by subtracting 10,000 then adding to adjust. An answer of 23,452 suggests that you are adjusting wrongly.

What mistake has Tom made in this subtraction? $6734 - 997 = 5731$

He has adjusted the wrong way, subtracting 1000 then subtracting 3 more rather than adding 3 back. The correct answer is 5737.

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Read 'Butterflies' by Kevin Crossley Holland

- Read the story aloud. Practise reading aloud so that you can make the surprise in the story clear. Can you add actions as you read?
- Read *Butterflies Version 1*. What is missing? Write the missing words on this version. These are adverbials.

2. Revise Adverbials

Use the *Revision Cards* to remind you of these.

Now complete the activities on 'Adverbials 1 and 2'.

3. Now for some writing

Write a paragraph about what might happen next in the story. What will the girl do about all the butterflies?

Try these Fun-Time Extras

- Can you use the butterfly template to make your own spectacular butterfly design?
- Can you find out about the 'Mount of Butterflies'? Use a web search then make a poster about what you find out about the mountain and about monarch butterflies.
- Can you make a paper butterfly following these instructions:
<https://www.youtube.com/watch?v=phY05EEJXJM> ?

Butterflies by Kevin Crossley-Holland

The girl sat on the sofa with her homework book on her knee. 'Butterfly Poem' she wrote at the top of the page. She could hear the thump thump-a-thump of the pop music in the flat upstairs. Then a boy shoved the evening newspaper through the letter-box—and then the telephone rang ...

How difficult it was to concentrate.

But after a while the girl caught a few colourful words and set them down on her white page. Then some more. And the more words she caught, the easier they became to catch, the best words in the world.

Next morning, the girl got ready to go to school. She opened her homework book and flicked to the page headed 'Butterfly Poem'. But where were the words? They had all gone. The girl looked at her book in amazement—she turned it upside down, she checked no page had been torn out, she leafed through it in case the words had somehow escaped to another page ...

Then it seemed to the girl as if her arms and legs were made of air, and her head was rising through the ceiling. She kissed her mum goodbye and closed the front door ...

The girl rubbed her eyes. She screwed them up and opened them again. All around her were little scraps of orange and turquoise and jasmine and violet: the whole grey street where she lived was quick and brightly-coloured with hundreds and thousands of butterflies.

Butterflies Version 1

The girl sat.

‘Butterfly Poem’ she wrote.

She could hear the thump thump-a-thump of the pop music.

A boy shoved the evening newspaper.

The telephone rang.

Revision Card

Adverbials

Adverbials tell us more about a verb.

Adverbials can be

a word,

a phrase,

or a clause.

hungrily

between the cracks

after the song ended

Adverbials

Adverbials tell us more about a verb.

The creature prowls.

The creature prowls **with hungry eyes**.

The creature prowls **beneath the bed**.

The creature prowls **during the night**.

In each sentence, the verb is modified by the **adverbial**.

Adverbials

Adverbials often open with a preposition.

The creature prowls with hungry eyes.

The creature prowls through the long grass.

The creature prowls during the night.

The **preposition** is part of the adverbial and links information to the sentence.

Adverbials

You can change the position of adverbials.

The creature prowled *with hungry eyes*, the creature prowled.

The creature prowled *through the grass*. *Through the grass*, the creature prowled.

When an adverbial appears in front of the sentence it is modifying it is called a **fronted adverbial**.

In the moonlit garden, the creature prowled.

Fronted adverbials are separated from the main clause by a comma.

Adverbials 1

These sentences are adapted from the story.

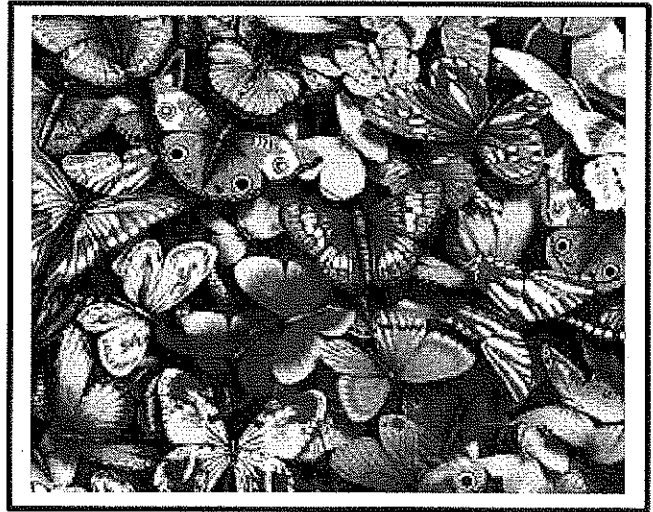
Read them, then choose the best adverbial to add from the list below.

Use each once only.

Add the adverbials after the main clause.

1. She peeped
2. The butterflies appeared
3. The people stared
4. Some butterflies followed
5. Later, the girl fell asleep

after her.
between the curtains.
around the street.
in the air.
in her own bed.



Add the adverbials before the main clause.

6. she heard the grandfather clock whirr and strike.
7. they heard the local news.
8. the girl got ready to go to school.
9. she went outside.
10. there was nothing unusual to be seen.

Next morning,
Before her mother could stop her,
At midnight,
Sadly,
After listening,

Adverbials 2

These sentences are an extension of the story!

Read them, then choose the best adverbial to add from the list below.

Use each once only.

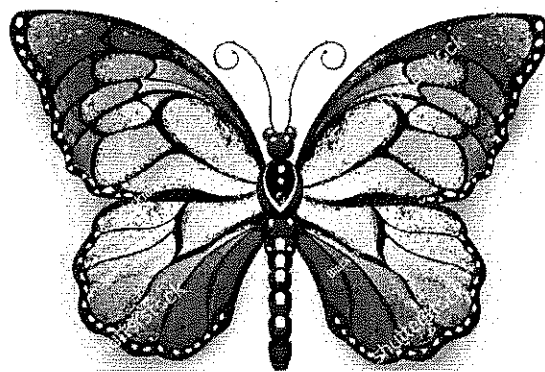
Choose whether to add the adverbials before or after the main clause. Check capital letters and punctuation when you have chosen.

1. she told Miss Blank, her teacher
2. she felt like a fool
3. she wished for the butterflies to return
4. a young man knocked on the door
5. there were several coloured butterflies

when she looked at the empty page
with some anxiety
as soon as she got back from school
around his head
with all her heart

Make up adverbials to add before or after the main clause. Check capital letters and punctuation when you write your sentence.

6. the man held a shining covered basket
7. some butterflies flew
8. she jumped
9. he lifted the cover
10. she could not believe what she saw

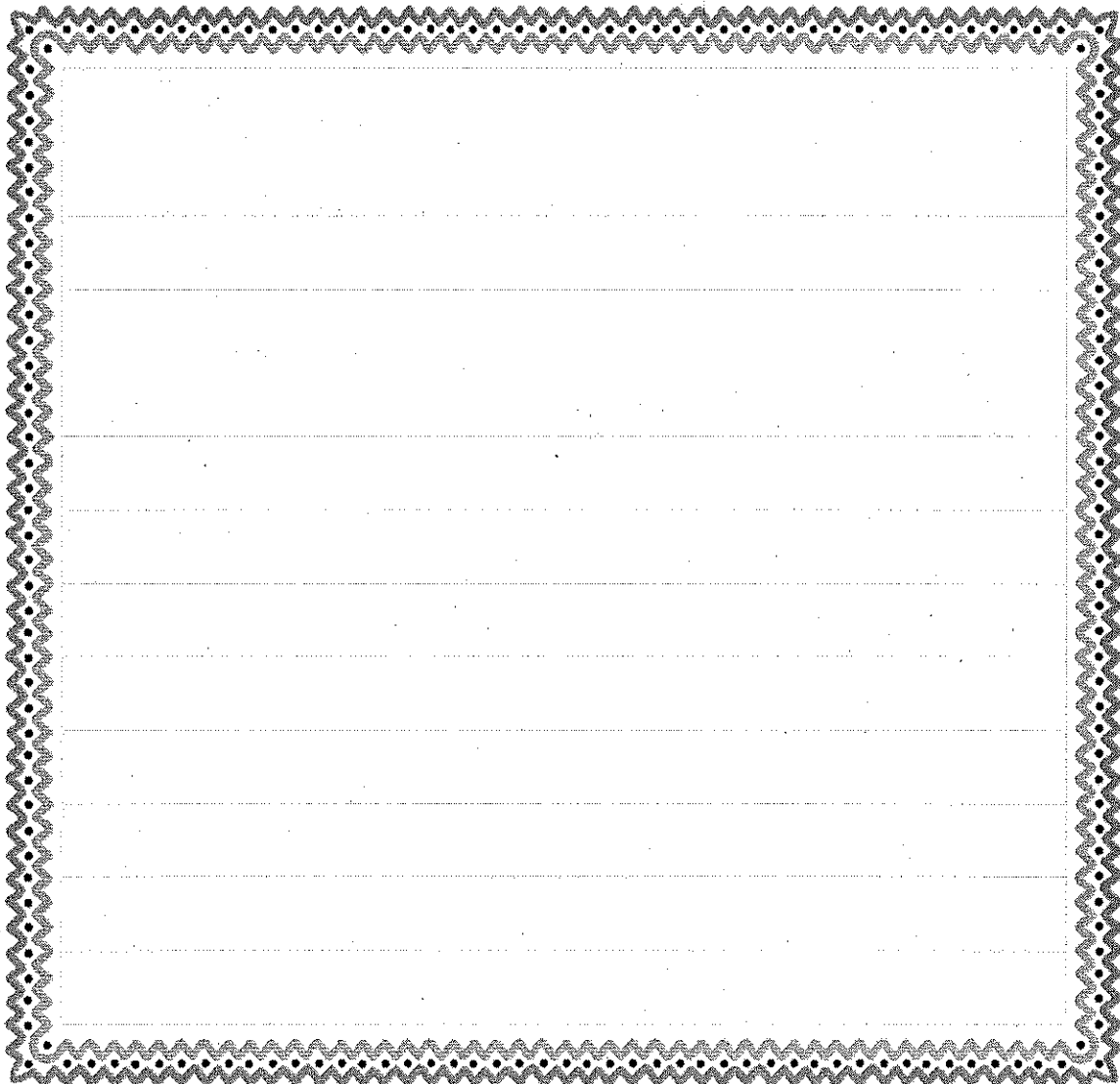


Writing

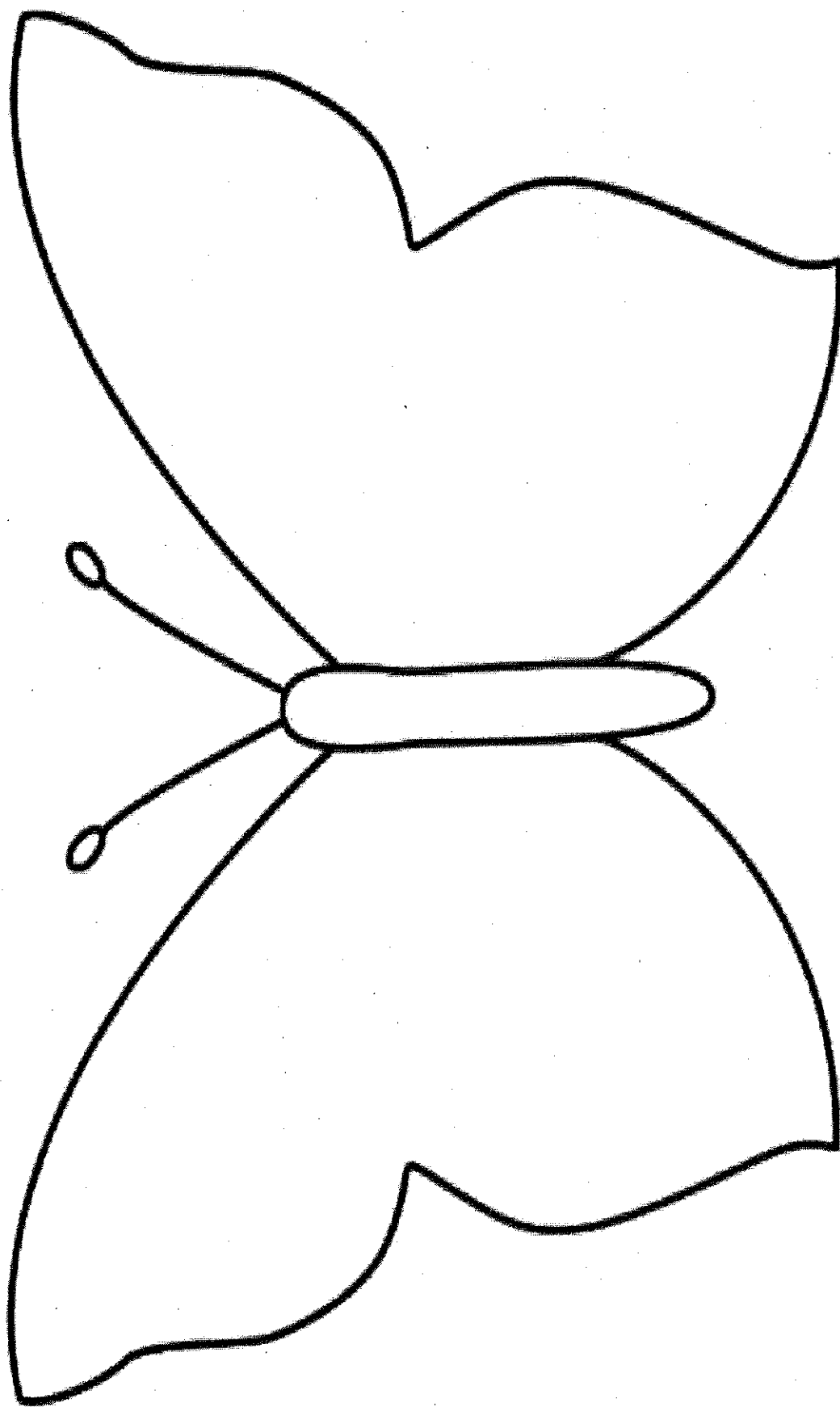
Write a paragraph about what happened next...

- What will the girl do next?
- What will she do with the butterflies?
- How will she arrive at school?
- What might her teacher say?

Try to include adverbials in your writing.

A large rectangular writing area with a decorative border. The border is composed of a repeating pattern of small dots and zig-zags. Inside the border, there are ten horizontal lines, creating a space for writing a paragraph.

Butterfly Template



Adverbials 1 and 2- Answers

1. She peeped **between the curtains**.
2. The butterflies **appeared in the air**.
3. The people stared **around the street**.
4. Some butterflies **followed after her**.
5. Later, the girl fell asleep **in her own bed**.
6. **At midnight**, she heard the grandfather clock whirr and strike.
7. **Next morning**, they heard the local news.
8. **After listening**, the girl got ready to go to school.
9. **Before her mother could stop her**, she went outside.
10. **Sadly**, there was nothing unusual to be seen.

NB children can add these adverbials before or after the main clause.

1. she told Miss Blank, her teacher **with some anxiety**.
2. **When she looked at the empty page**, she felt like a fool
3. **With all her heart**, she wished for the butterflies to return
4. A young man knocked on the door **as soon as she got back from school**.
5. **Around his head**, there were several coloured butterflies

Children are to make up their own adverbials; these are just examples.

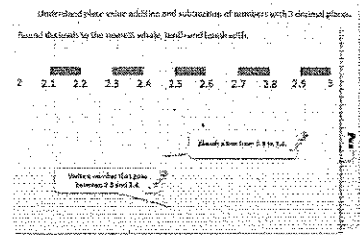
6. **In one hand**, the man held a shining covered basket.
7. **Around his head and arms**, some butterflies flew
8. She jumped **up in excitement**.
9. **Slowly and carefully**, he lifted the cover
10. She could not believe what she saw **in his basket**.

Year 5: Week 1, Day 2

Written (vertical) subtraction: decomposition

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the Learning Reminders. They come from our PowerPoint slides.



2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.

Practice Sheet (Hot)

For written addition and subtraction

1. $4.518 + 0.2$	2. $4.518 - 0.08$
3. $4.518 - 0.004$	4. $4.518 - 0.02$
5. $0.291 + 0.11$	6. $4.211 - 0.101$
7. $4.211 - 0.011$	8. $5.840 - 0.211$
9. $5.840 - 0.18$	10. $5.840 - 0.011$
11. $5.840 - 0.009$	12. $4.789 - 0.001$

Answers:

1. 4.718, 2. 4.438, 3. 4.514, 4. 4.498, 5. 0.401, 6. 4.110, 7. 4.200, 8. 5.629, 9. 5.660, 10. 5.829, 11. 5.831, 12. 4.788

3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?

A Bit Stuck?

Questions:

1. What is the value of the '4' in 4.518?
2. What is the value of the '4' in 4.518 - 0.08?
3. What is the value of the '4' in 4.518 - 0.004?
4. What is the value of the '4' in 4.518 - 0.02?
5. What is the value of the '4' in 4.211 - 0.101?
6. What is the value of the '4' in 4.211 - 0.011?
7. What is the value of the '4' in 5.840 - 0.211?
8. What is the value of the '4' in 5.840 - 0.011?
9. What is the value of the '4' in 5.840 - 0.009?
10. What is the value of the '4' in 4.789 - 0.001?

Answers:

Question	Answer
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!

Check your understanding

Identify the value of the '4' in the following numbers:

- (a) 4.077
- (b) 4.821
- (c) 0.043
- (d) 5.104
- (e) 48.739

How many times must Dan multiply 0.042 by 10 to get 42,000?

What number is one hundred times smaller than 0.47?

Learning Reminders

Use decomposition to subtract pairs of 5-digit numbers.

Find $64,783 - 35,327$

Let's remind ourselves how to use both
expanded and compact column subtraction
(decomposition)...

First subtract the 1s, then 10s, then 100s, then
1000s, then 10,000s.

50,000	14,000	70	13	5	14	7	13
60,000	40,000	700	80	8	4	7	8
- 30,000	5000	300	20	7	- 3	5	3
<hr/>				<hr/>			
20,000	9000	400	50	6	2	9	4
				5	6	5	6
<u>29,456</u>							

Learning Reminders

Use decomposition to subtract pairs of 5-digit numbers.

Have a go at using either expanded or compact decomposition to calculate $72,846 - 47,063$.

$$\begin{array}{r}
 70,000 \quad 2000 \quad 800 \quad 40 \quad 6 \\
 - 40,000 \quad 7000 \quad 0 \quad 60 \quad 3 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 7 \quad 2 \quad 8 \quad 4 \quad 6 \\
 - 4 \quad 7 \quad 0 \quad 6 \quad 3 \\
 \hline
 \end{array}$$

Answers

60,000	12,000	700	140	6	12	7	14
70,000	20,000	800	40	6	7	2	8
- 40,000	7000	0	60	3	- 4	7	0
20,000	5000	700	80	3	2	5	7
<u>25,783</u>					8	3	

Practice Sheet Mild

Subtracting 4-digit numbers

Complete each subtraction.

1. $4582 - 2317$
2. $9635 - 2381$
3. $5056 - 3214$
4. $8264 - 2327$
5. $6523 - 3289$
6. $8236 - 5460$
7. $4562 - 1684$
8. $9450 - 5728$

Choose two of your subtractions to check with addition.

Challenge

Find the missing digits in this subtraction:

$$\square 4 1 \square - 1 \square 3 6 = 7 0 \square 7$$

Practice Sheet Hot

Subtracting 5-digit numbers

Complete each subtraction.

1. $86,541 - 23,016$
2. $72,438 - 51,274$
3. $65,056 - 23,432$
4. $91,786 - 34,235$
5. $72,872 - 25,348$
6. $56,284 - 32,518$
7. $92,628 - 45,371$
8. $56,723 - 21,575$
9. $45,842 - 27,486$

Choose two of your subtractions to check with addition.

Challenge

Write a 5-digit – 5-digit subtraction where you will have to move numbers from four columns!

Extra Practice for All
Subtracting 5-digit numbers

- | | | |
|---------------------|---------------------|---------------------|
| 1. 43,972 - 37,439 | 2. 56,382 - 22,936 | 3. 85,604 - 42,367 |
| 4. 74,083 - 41,448 | 5. 93,487 - 38,124 | 6. 83,572 - 47,429 |
| 7. 82,005 - 79,876 | 8. 45,321 - 24,756 | 9. 92,467 - 36,871 |
| 10. 40,625 - 23,478 | 11. 63,724 - 38,474 | 12. 83,074 - 48,238 |
| 13. 72,380 - 56,524 | 14. 92,412 - 67,845 | 15. 90,401 - 78,832 |

Challenge

Write a subtraction which has an answer of 12,345.
The subtraction must require you to move a ten and a hundred.

Practice Sheets Answers

Subtracting 4-digit numbers (mild)

1. $4582 - 2317 = 2265$
2. $9635 - 2381 = 7254$
3. $5056 - 3214 = 1842$
4. $8264 - 2327 = 5937$
5. $6523 - 3289 = 3234$
6. $8236 - 5460 = 2776$
7. $4562 - 1684 = 2878$
8. $9450 - 5728 = 3722$

Challenge

$$8413 - 1336 = 7077$$

Subtracting 5-digit numbers (hot)

1. $86,541 - 23,016 = 63,525$
2. $72,438 - 51,274 = 21,164$
3. $65,056 - 23,432 = 41,624$
4. $91,786 - 34,235 = 57,551$
5. $72,872 - 25,348 = 47,524$
6. $56,284 - 32,518 = 23,766$
7. $92,628 - 45,371 = 47,257$
8. $56,723 - 21,575 = 35,148$
9. $45,842 - 27,486 = 18,356$

Subtracting 5-digit numbers (extra practice for all)

- | | |
|--------------------------------|--------------------------------|
| 1. $43,972 - 37,439 = 6533$ | 2. $56,382 - 22,936 = 33,446$ |
| 3. $85,604 - 42,367 = 43,237$ | 4. $74,083 - 41,448 = 32,635$ |
| 5. $93,487 - 38,124 = 55,363$ | 6. $83,572 - 47,429 = 36,143$ |
| 7. $82,005 - 79,876 = 2129$ | 8. $45,321 - 24,756 = 20,565$ |
| 9. $92,467 - 36,871 = 55,596$ | 10. $40,625 - 23,478 = 17,147$ |
| 11. $63,724 - 38,474 = 25,250$ | 12. $83,074 - 48,238 = 34,836$ |
| 13. $72,380 - 56,524 = 15,856$ | 14. $92,412 - 67,845 = 24,567$ |
| 15. $90,401 - 78,832 = 11,569$ | |

Challenge

There are many possible answers here, e.g. $65,228 - 52,883 = 12,345$

A Bit Stuck? Pick 'n' mix

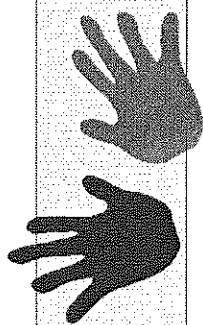
Work in pairs

What to do:

- Choose a pair of numbers to add together, one from each star. Write the sum and work out the answer.
- Repeat at least twice more.
- Now choose a pair of numbers which are easy to subtract. Work out the answer.
- Repeat at least twice more.
- How many additions and subtractions can you work out before time is up?

Things you will need:

- A pencil



534 375

647 453

301 220

32 24

S-t-r-e-t-c-h:

Sort these four additions into those you would calculate using a written method and those you would calculate mentally: $635 + 287$, $734 + 203$, $527 + 310$ and $478 + 259$. For one of each, tell someone why you made those choices.

Learning outcomes:

- I can use place value to add and subtract to/from 3-digit numbers (changing two digits).
- I am beginning to choose mental or written methods.

A Bit Stuck?

Hops, skips and jumps

Things you will need:

- A pencil



What to do:

- Choose at least four subtractions to work out.
Draw a line from the smaller number to the bigger number.
Use Frog to work out the difference between the two numbers.
- Remember to add up your hops and jumps at the end!

$$6000 - 5642$$

$$6002 - 6938$$

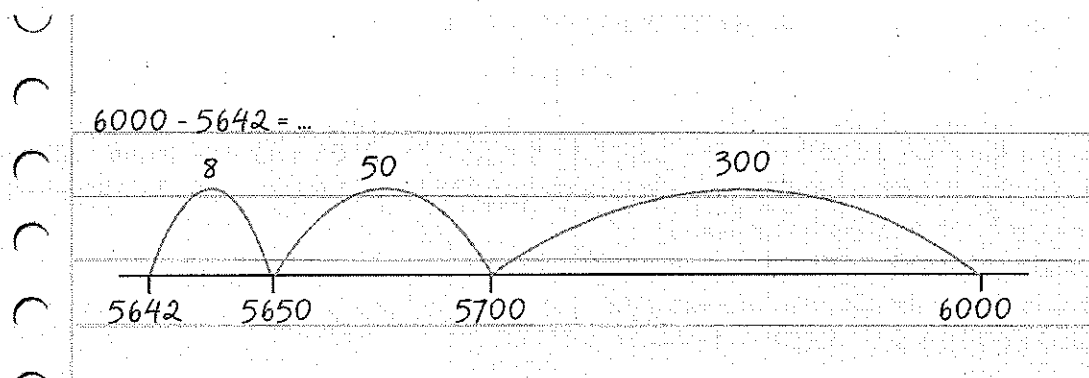
$$5000 - 3981$$

$$4005 - 3964$$

$$9000 - 4567$$

$$6001 - 4983$$

$$3004 - 2572$$



S-t-r-e-t-c-h:

Work out the answers to $6003 - 4579$ and $5010 - 3678$.

Frog needs to work a bit harder for these!

Learning outcomes:

- I can use Frog to subtract 4-digit numbers from multiples of 1000 (e.g. $4000 - 3786$).
- I can use Frog to subtract 4-digit numbers when the larger number has zeros (e.g. $4002 - 3987$).
- I am beginning to use Frog to subtract pairs of 4-digit numbers which are further apart from each other.

Check your understanding

Questions

Use just the digits 4 and 5 to create a 5-digit – 5-digit subtraction to give an answer with at least two 9s.

Can you get 9091?

What is the smallest answer you can get?

What is the largest?

Solve both these subtractions using vertical decomposition (expanded or compact – you choose).

(a) $67,493 - 21,561$

(b) $50,005 - 44,878$

Did you find one more straightforward than the other? Explain your thoughts...

Find the missing numbers in this subtraction:

$$\begin{array}{r} 12 \star 62 \\ - 93 \blacksquare 8 \\ \hline 311 \blacktriangle \end{array}$$

Fold here to hide answers:

Check your understanding

Answers

Use just the digits 4 and 5 to create a 5-digit – 5-digit subtraction to give an answer with at least two 9s. e.g. $55,544 - 44,555$. Other answers are possible; the key is to have 4s in the first number in the same place as 5s in the second.

Can you get 9091? $54,545 - 45,454$

What is the smallest answer you can get? $55,555 - 55,554 = 1$

What is the largest? $55,555 - 44,444 = 11,111$

Solve both these subtractions using vertical decomposition (expanded or compact – you choose).

(a) $67,493 - 21,561 = 45,932$ (b) $50,005 - 44,878 = 5127$

Did you find one more straightforward than the other? Explain your thoughts... The first calculation is probably best-done using column subtraction, since neither number is close to 10,000s and exchanges between columns are needed.

Since 50,005 is just over 50,000 the second can quickly be solved by counting up (Frog) from 44,878.

Find the missing numbers in this subtraction:

Note the need to decompose the 60.

$$\begin{array}{r} 512 \\ 124 \cancel{6}2 \\ - 9348 \\ \hline 3114 \end{array}$$

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Read 'Ouch!' by Kevin Crossley Holland

- Read the story aloud, using good expression to read what is said.
- What five words could describe the shepherds? What five words could describe the woman? Which of the characters do you admire the most?

2. Revise Verbs and Present and past tenses

Use the *Revision Cards* to remind you of these.

Now complete the 'Ouch! Activities'.

3. Now for some writing

Write a paragraph about what the shepherds did next.

What trouble did they get into this time!

Try these Fun-Time Extras

- Create a design for the woman's sun-and-moon brooch.
- Can you make a tangled leg illustration of the shepherds?
- Can you pretend to be one of the shepherds telling the story of what happened?

Ouch! By Kevin Crossley-Holland

Five shepherds fell asleep under a tree. And in their sleep they sighed and stretched and tossed and turned and tied their legs into a knot. When they woke up, they didn't know which leg belonged to who.

"I'm hungry," said one shepherd.

"And I'm thirsty," said another.

All five of them were thirsty and hungry, but they were unable to stand up.

"What's wrong with you, men?" shouted a woman on her way to the well: The sun's up and you're still on your backs.'

"We can't stand up," said the shepherds. "We don't know which leg belongs to who."

"What's it worth?" asked the woman.

"Worth?" said one shepherd. "Worth? I don't know. How about ten toes of tobacco?"

"Fifty," said the woman. "Fifty toes and I'll show you which leg belongs to who."

"All right," said the shepherds.

Then the woman unfastened her sun-and-moon brooch, and stuck the pin into the nearest foot.

"Ouch!" yelled one shepherd.

"That's one of yours," said the woman. "Pull, man! Pull!"

Then the woman stuck another foot.

"Ouch!"

"That's yours."

"Ouch!"

"Pull, man! Pull!"

One by one the shepherds stood up on their stiff feet. And each poor man fished in his pocket for ten toes of tobacco.

Revision Card

Verbs

Verbs indicate that someone or something is doing, feeling or being.

*He drives.
The sheep sleep.
The sun sets.
I won!*

Usually verbs have the name of a person or thing or a pronoun in front of them.

Verbs have a **tense**.

They can tell us *when* the action happened.

Past tense	Present tense
<i>The shepherds slept. Their legs tangled. She saw them there. She made them call out.</i>	<i>The shepherds sleep. Their legs tangle. She sees them there. She makes them call out.</i>

For regular verbs we add ed to show that an action is **in the past and complete**.

*walked jumped shouted tangled
stretched sighed balanced*

Irregular verbs take different forms when showing past tense; we learn them through hearing them used.

ran won hit slept

Ouch! Activities

1. Read the story **Ouch!** Look at the **Grammar Card** to remind you of past and present tense.

2. Highlight the verbs that are in the past tense

Five shepherds fell asleep under a tree. And in their sleep they sighed and stretched

3. Write the paragraph again in the present tense

Five shepherds fall asleep under a tree. And in their sleep they sigh and stretch

4. How does this change of tense change the story?

5. Is this direct speech in the present or the past tense?

'I'm hungry,' said one shepherd.
'And I'm thirsty,' said another.

Remember – direct speech is what is said!

6. Write it so it is in the past tense

7. How does this change of tense change the story?

8. Find two more sentences written in the past tense and write them out. Underline the verbs.

Writing

Write a paragraph about what happened next...

- What did the shepherds do?
- Will they get into another mess?
- How will the woman trick them this time?

Write in the past tense. Include direct speech in present tense.

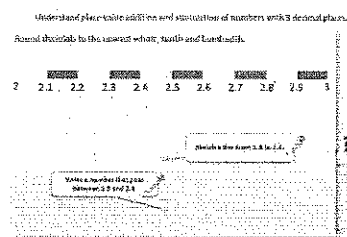
A large rectangular writing area with a decorative border. The border consists of a repeating pattern of small black dots and zig-zags. Inside the border, there are several horizontal dashed lines to guide writing.

Year 5: Week 1, Day 3

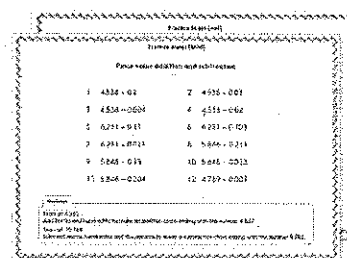
Counting up to subtract; solve subtraction problems

Each day covers one maths topic. It should take you about 1 hour or just a little more.

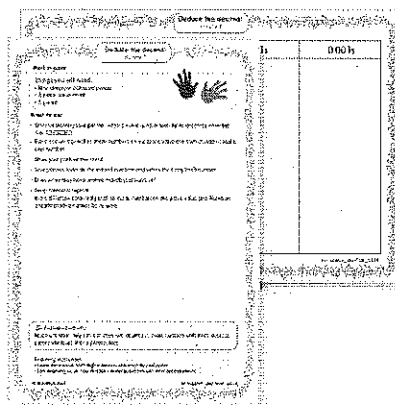
1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



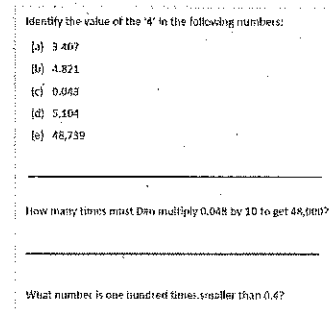
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



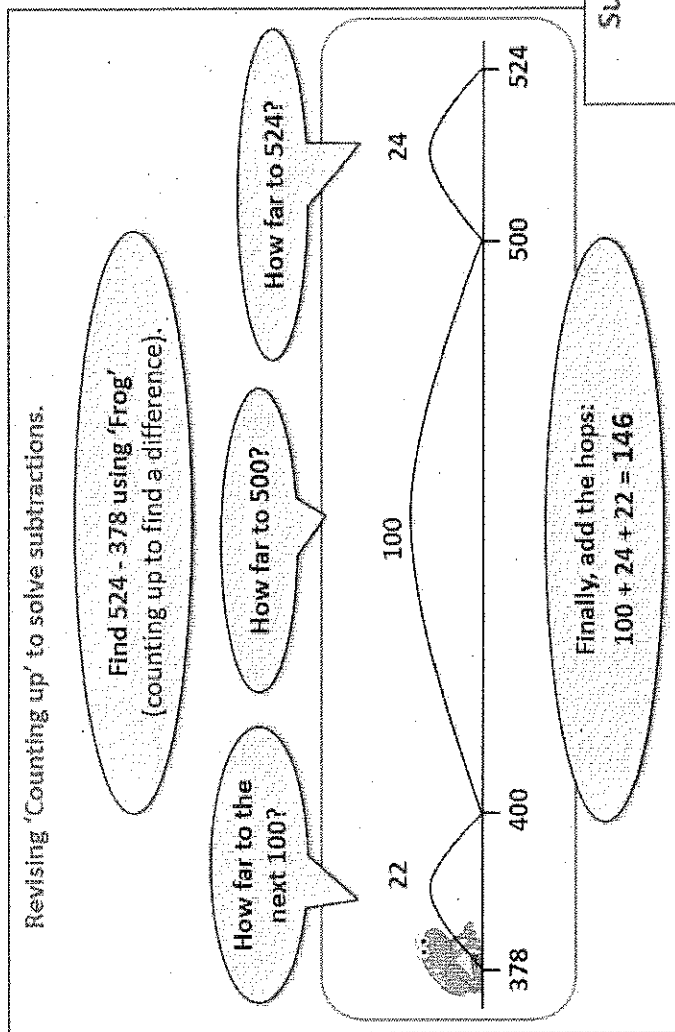
3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



Learning Reminders



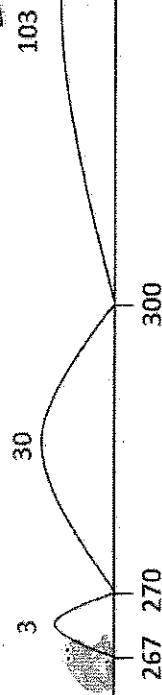
Subtraction: Why count up?

Choose counting up when vertical decomposition would result in lots of exchanging across columns...

$$\begin{array}{r} 3913 \\ - 267 \\ \hline 136 \end{array}$$

$$403 - 267 = 136$$

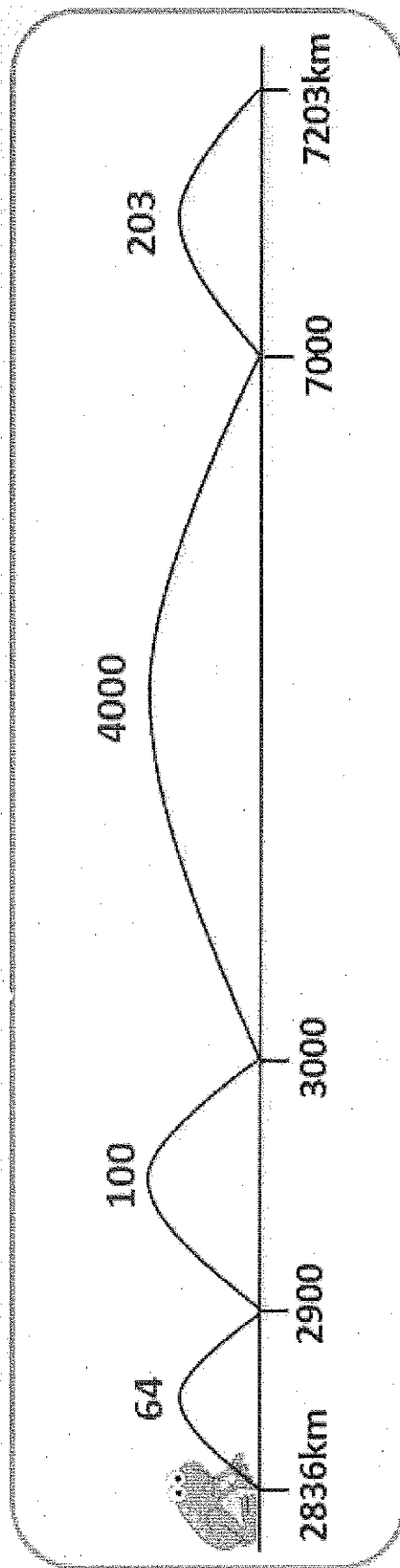
$$103 + 30 + 3 = 136$$



Learning Reminders

'Counting up' to solve subtraction problems.

Ally is cycling across America, a total distance of 7203km!
She has already covered 2836km, so how far is left to cycle...?!



Don't forget to add the hops:
 $4000 + 203 + 100 + 64 = 4367\text{km}$

Practice Sheet for All Multiples of 100

Draw number lines to show Frog solving these problems:

1. $1000 - 573$
2. $2000 - 1958$
3. $6000 - 5839$
4. $4000 - 2748$
5. $5000 - 2349$
6. $9000 - 4275$
7. $8000 - 5624$
8. $7000 - 3453$
9. $3000 - 2222$
10. $6000 - 3333$

Challenge

Look at your number lines. Can you find some ways to solve the problems with fewer jumps?

Practice Sheet Mild

Addition and subtraction problems

1. $\boxed{} + 320 = 850$

2. $1000 - \boxed{} = 678$

3. $920 - \boxed{} = 480$

4. $\boxed{} - 420 = 370$

5. $3200 + \boxed{} = 7800$

6. $7000 - \boxed{} = 4579$

7. $9400 - \boxed{} = 4900$

8. $\boxed{} - 2300 = 5800$

9. Adam has 520 health points. He finds a potion and ends up with 770 health points. How many points did he earn from the potion?
10. Caitlin has 3475 experience points. She needs 5000 experience points to enter the next world. How many more experience points does she need?
11. Sasha lost 240 health points. Now she has 570 health points. How many health points did she have to start with?
12. Niall had 4500 experience points. By the end of the school holidays, he had 7200 experience points! How many experience points did he gain?

Practice Sheet Hot

Addition and subtraction problems

1. $4500 + \text{ } = 7200$

2. $8100 - \text{ } = 4600$

3. $7000 - \text{ } = 3542$

4. $\text{ } - 3400 = 2700$

5. Stefan has 4783 health points. He was at full health at 8000 points. How many points has he lost?

6. Phoebe has 460 health points. She drinks a green potion worth 240 points and a blue potion. She ends up with 950 health points. How many points was the blue potion worth?

7. Ahmed earns 4700 experience points and now has 9200 experience points. How many points did he have before?

8. Charmaine has 7300 experience points. She needs 9000 points to get the next level. Should she choose to try and solve a puzzle worth 1800 points or a puzzle worth 1600 points?

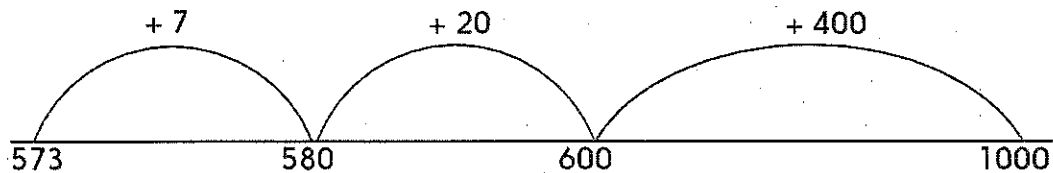
9. Toby has 3400 health points. He drinks potions worth 2300 and 1600 points. He wants to get to full health which is 8000 points. How many more points will he need?

10. Write your own computer game word problem to go with $\text{ } + 3600 = 8400$.

Practice Sheets Answers

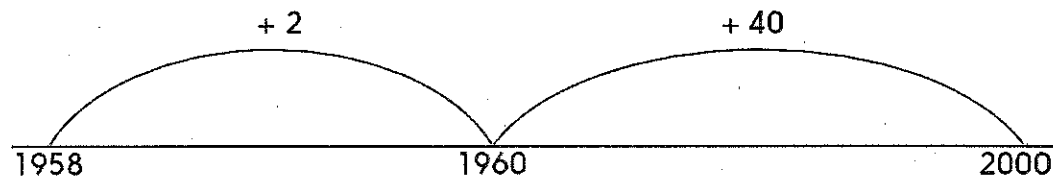
Multiples of 1000 (Practice for all)

1. $1000 - 573$



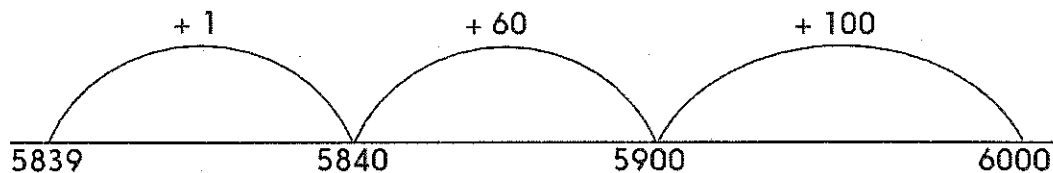
Add the hops: $400 + 20 + 7 = 427$

2. $2000 - 1958$



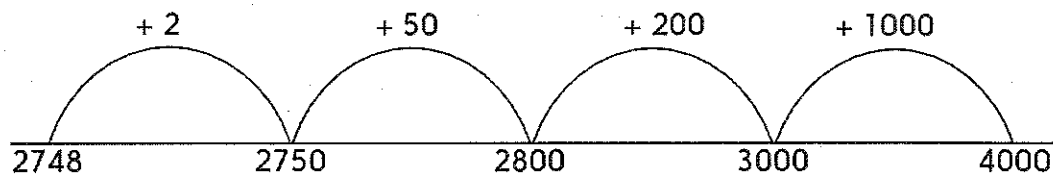
Add the hops: $40 + 2 = 42$

3. $6000 - 5839$



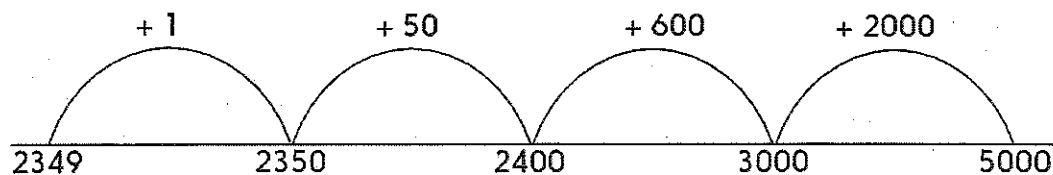
Add the hops: $100 + 60 + 1 = 161$

4. $4000 - 2748$



Add the hops: $1000 + 200 + 50 + 2 = 1252$

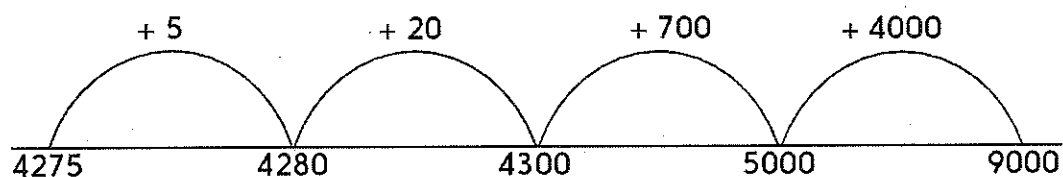
5. $5000 - 2349$



Add the hops: $2000 + 600 + 50 + 1 = 2651$

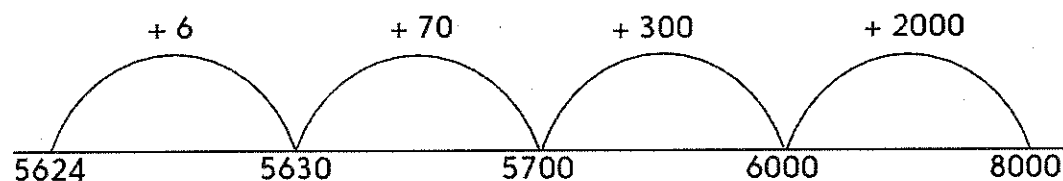
Multiples of 1000 (Practice for all) continued

6. $9000 - 4275$



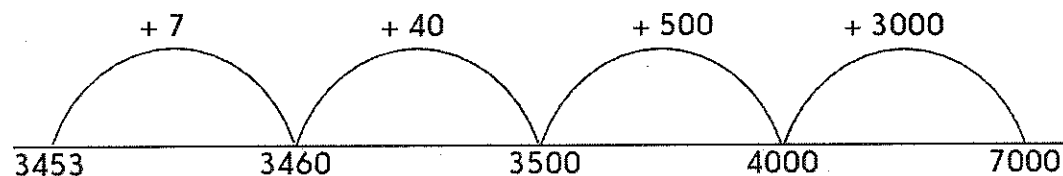
Add the hops: $4000 + 700 + 20 + 5 = 4725$

7. $8000 - 5624$



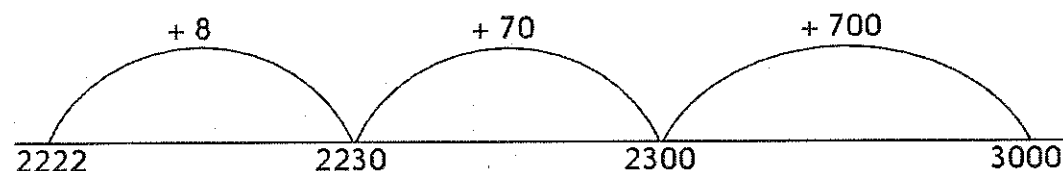
Add the hops: $2000 + 300 + 70 + 6 = 2376$

8. $7000 - 3453$



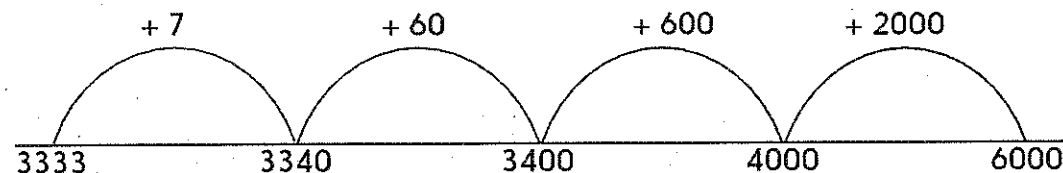
Add the hops: $3000 + 500 + 40 + 7 = 3547$

9. $3000 - 2222$



Add the hops: $700 + 70 + 8 = 778$

10. $6000 - 3333$



Add the hops: $2000 + 600 + 60 + 7 = 2667$

Addition and subtraction problems (mild)

1. $530 + 320 = 850$
2. $1000 - 322 = 678$
3. $920 - 440 = 480$
4. $790 - 420 = 370$
5. $3200 + 4600 = 7800$
6. $7000 - 2421 = 4579$
7. $9400 - 4900 = 4500$
8. $8100 - 2300 = 5800$
9. $770 - 520 = 250$ Adam earned 250 points from the potion.
10. $5000 - 3475 = 1525$ Caitlin needs 1525 points.
11. $570 + 240 = 810$ Sasha had 810 points to start with.
12. $7200 - 4500 = 2700$ Niall gained 2700 points.

Addition and subtraction problems (hot)

1. $4500 + 2700 = 7200$
2. $8100 - 3500 = 4600$
3. $7000 - 3458 = 3542$
4. $6100 - 3400 = 2700$
5. $8000 - 3217 = 4783$ Stefan has lost 3217 points.
6. $460 + 240 = 700$ $950 - 700 = 250$. The blue potion is worth 250 points.
7. $9200 - 4700 = 4500$ Ahmed had 4500 points before.
8. $9000 - 7300 = 1700$ Charmaine needs to solve a puzzle worth 1800 points.
9. $3400 + 2300 + 1600 = 7300$ $8000 - 7300 = 700$. Toby needs 700 more points.
10. Check that your questions correctly identify the need to use the calculation $4800 + 3600 = 8400$.

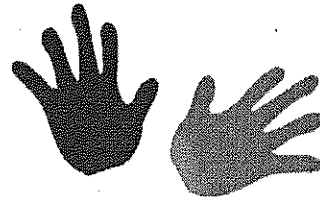
A Bit Stuck?

Hop to hundreds, and beyond!

Work in pairs

Things you will need:

- A pencil



What to do:

- Tell your partner, one step at a time, how to calculate the answer to the subtraction.
Does it need a hop in ones to the next 100, then another small hop, or will you need to jump some tens too?
- Answer as many subtractions as you can.

Hop, hop

$$305 - 298$$

$$802 - 794$$

$$603 - 597$$

$$506 - 495$$

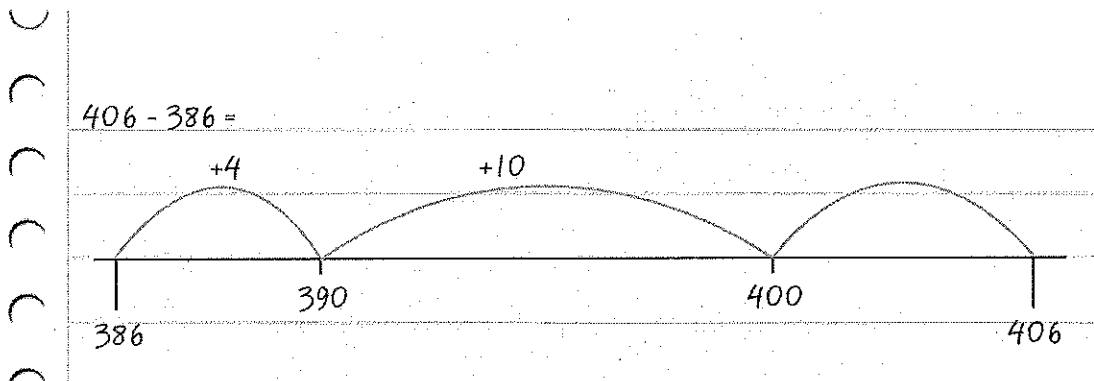
Hop, jump, hop

$$406 - 386$$

$$203 - 175$$

$$501 - 468$$

$$604 - 559$$



S-t-r-e-t-c-h:

Choose two subtractions from the hop, hop section to check using addition.

Learning outcomes:

- I can use counting up (Frog) to subtract 3-digit numbers either side of a multiple of 100, e.g. $304 - 297$, then $304 - 267$.
- I am beginning to use addition to check subtraction.

Check your understanding

Questions

Never, sometimes, always true?

- Subtracting a 4-digit number from a multiple of 10,000 gives a 4-digit answer.
 - The difference between two 5-digit multiples of 1000 is a multiple of 1000.
-

Complete the calculations:

- (a) $[\quad] + 23,478 = 30,000$
(b) $8100 - [\quad] = 6600$
(c) $5999 = [\quad] - 3578$

Fold here to hide answers:

Check your understanding

Answers

Never, sometimes, always true?

- Subtracting a 4-digit number from a multiple of 10,000 gives a 4-digit answer.

This happens only when subtracting from 10,000 itself, e.g. $10,000 - 8560 = 1440$.

However, if a number 9001 or greater is subtracted from 10,000, a 3-digit number (or fewer) will be the result, e.g. $10,000 - 9285 = 715$.

Also, a 5-digit answer occurs when starting with other multiples of 10,000, e.g. $30,000 - 2350 = 27,650$.

- The difference between two 5-digit multiples of 1000 is a multiple of 1000.

Always true, e.g. $48,000 - 23,000 = 25,000$. Since the numbers are multiples of 1000, their difference must be too.

Give examples to illustrate explanations whenever possible.

Complete the calculations:

- (a) $6522 + 23,478 = 30,000$
(b) $8100 - 1500 = 6600$
(c) $5999 = 9577 - 3578$

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Read 'Hunted'

- What do you like about the story? Is there anything that you dislike? What patterns did you notice? Are there any puzzles?

2. Think about 'Unanswered Questions'

Read the *Unanswered Questions*. Make up answers to these and write your answers as clear sentences.

3. Now to plan a story

Use the *Storyboard* to plan a prequel to the story *Hunted*.

A prequel comes before the main story. It should give answers to some of the *Unanswered Questions*. You can write and draw to record your story.

Try these Fun-Time Extras

- Use your Storyboard to tell your story to someone else.
- Make a recording of your telling of your story.
- Draw a front-cover for the book of your story.
- Write and illustrate your story. You could use the *Features List* to guide your writing.

Hunted

He was running and running, crashing through the branches and tripping over the tree roots. The mice and the shrews were rushing out of his way, the heavy footfalls warning them, scuttling under cover amongst the dead leaves and moss of the forest floor. A badger, lolloping slowly along the edge of the trees, turned sharply to hide in the ditch at the far end of the meadow adjoining the wood. And an owl, swooping and soaring low over the bracken, wheeled around and screeched a warning to the other animals, "Skee-at, skee-at."

The man's breath was coming in short sharps bursts. He was bending over as he ran, almost crouching and keeping his head down, clutching his side. He cared not at all as the brambles scratched his coat, legs and face, and the low-lying branches of the smaller trees slapped him as he passed. He was running blindly, dashing hither and thither through the forest. But he was also searching, desperately seeking something, a sign, a small indication.

And then, suddenly, the reason for the man's panic became apparent to the watching stoats and weasels, sitting on their hind-legs, front paws in the air, ready to run if need be. Behind the trees, marching down across the meadow and heading rapidly towards the wood, were five soldiers. They were jogging, holding their guns, great grey coats flapping around their dark boots, chains clinking at their waists. The badger, too frightened to move, crouching stock-still in the ditch between the meadow and the wood, could still hear the crashing sounds of the man's wild, erratic race through the trees.

One of the soldiers gave a quick shout, "Hoy!" He jumped smartly over the ditch, and the others followed, leaping after him, narrowly missing the badger's broad, grey, striped back. At the sound of the soldier's bark, the running sounds in the forest ceased abruptly. The soldiers halted at the edge of the trees. They listened. There was silence. A soft scurrying sound told the stoats and weasels that the badger had gone to earth. An owl passed screeching overhead. The branches of the trees creaked gently, and the leaves whispered amongst themselves, as they painted the night sky an ever darker velvet blue. The moon had long since set, and a few stars were twinkling overhead. It was the hour before dawn,

the dead time of the night, when only the hunted and the hunter are awake.

The man stood, poised for flight, beside a large oak tree. He tried to control his gasping breaths, holding his mouth open and drawing in the air in great silent gulps. His heart was pounding so loudly he thought it affected the entire forest, creating a deep thumping beat, which seemed to vibrate through the trees. As he stood, frozen in time and space, it seemed to him that all the animals were similarly petrified. Nothing moved. Not even a mouse stirred on the leaf-strewn floor. A fox stood at the edge of the clearing, a dead rabbit at its feet, and a deer paused, head lowered, eyes wide, as it listened for danger.

Suddenly the soldiers moved. "This way!" the captain called, and he pushed the bracken aside and started running in great bounding steps towards the centre of the wood. At the same moment, the man saw it. There it was. The sign for which he had been searching. He ran forward, past the petrified deer, and to the side of the clearing. There was a glint of metal, a gleam of gold beneath the leaves. The hunted man scrambled and pulled. A trap door sprang open and, in the nick of time, he slithered inside and pulled it shut behind him. There was a soft click, and the leaves stirred.

The soldiers came crashing into the clearing. Just as they skidded to a halt, right beside the oak tree where the hunted man had stood not a minute earlier, the deer shifted. Quietly, and with slow steps, it turned and moved, coming to stand right over the trap door, and completely covering the flat golden handle once more with leaves and earth. The deer stood there. The soldiers stared at it. They peered around the clearing and then shone torches into all the dark corners. Finally, holding their torches high, they turned and started searching further along the other side of the trees.

The deer quivered. Hunter or hunted. It knew the score. It took a side. After a while, it turned and leapt effortlessly away, out of the trees and across the meadow. It had saved a man's life.

Unanswered Questions

Why was the man in the forest?

Why was he running?

How had he got there?

Had he been there before?

How long had he been chased?

Why was he holding his side?

How did the soldiers know where he was?

Did anyone else know that he was in the forest?

Who was commanding the soldiers?

Why were they chasing him?

What would they have done if they found him?

How did the man know about the trapdoor?

Why couldn't he find it straight away?

Why did the deer help the man?

[illegible]

Features List

Mystery

Importance of Animals

Threat/Tension

Mix of long and short sentences

Vivid description

Physical feelings of man described

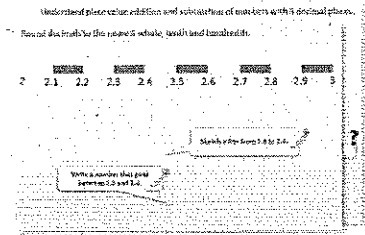
Only a little dialogue, more description and action

Year 5: Week 1, Day 4

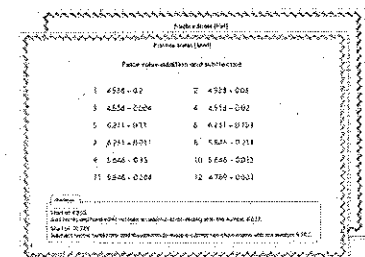
Column addition of decimals

Each day covers one maths topic. It should take you about 1 hour or just a little more.

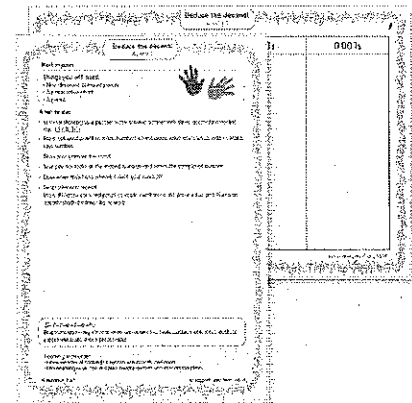
1. Start by reading through the Learning Reminders. They come from our PowerPoint slides.



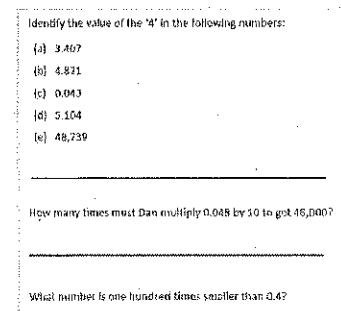
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



Learning Reminders

Use written addition to add decimals.

Calculate $4.56 + 2.37$

Let's find the exact total using column addition; 'expanded' method first...

Add the 0.01s, then the 0.1s, then the 1s.

$$\begin{array}{r} 4 \quad 0.5 \quad 0.06 \\ + \quad 2 \quad 0.3 \quad 0.07 \\ \hline 6 \quad 0.9 \quad 0.03 \\ \hline 6.93 \end{array}$$

Remember to leave a blank row above the answer line.

$$0.06 + 0.07 = 0.13$$

...now the 'compact' method.

Add the 0.01s, then the 0.1s, then the 1s.

$$\begin{array}{r} 4.56 \\ + 2.37 \\ \hline 6.93 \end{array}$$

Use written addition to add decimals.

Find $35.6 + 78.5$

Add the 0.1s, then the 1s, then the 10s.

$$\begin{array}{r} 30 \quad 5 \quad 0.6 \\ + 70 \quad 8 \quad 0.5 \\ \hline 10 \quad 1 \\ \hline 110 \quad 4 \quad 0.1 \\ \hline 114.1 \end{array}$$

or

$$\begin{array}{r} 35.6 \\ + 78.5 \\ \hline 114.1 \end{array}$$

Learning Reminders

Use written addition to add decimals.

$$45.7 + 3.45$$

Are you happy
with this
layout?

$$\begin{array}{r} 45.7 \\ + 3.45 \\ \hline \end{array}$$

$$\begin{array}{r} 45.7 \\ + 3.45 \\ \hline 49.15 \end{array}$$

No! The columns need to be aligned correctly.

We need to align tenths with tenths, etc. The easy way to do this is to align the decimal point in each number.

Learning Reminders

Column addition of decimal numbers.

Table of shot put results

Athlete	1st throw	2nd throw
Ceri	21.67m	24.79m
James	22.12m	24.65m
Gurpit	22.45m	21.89m
Natasha	23.57m	22.68m
Alice	22.56m	23.13m

Find
Ceri's total

$$\begin{array}{r} 21.67\text{ m} \\ + 24.79\text{ m} \\ \hline \end{array}$$

Practice Sheet Mid

Adding decimals

Add each pair of numbers to find an exact total.

1. $34.5 + 27.3$ 6. $5.42 + 6.37$

2. $62.7 + 23.5$ 7. $4.48 + 3.27$

3. $24.8 + 43.9$ 8. $5.63 + 2.84$

4. $46.7 + 25.5$ 9. $6.57 + 2.48$

5. $47.8 + 34.4$ 10. $7.85 + 4.56$

How accurate were your estimates?

Practice Sheet Mild

Shot put results

Who do you think won the shot put event?
Find the total of the two throws for each athlete.
Then rank the athletes.

Athlete	1st throw	2nd throw
Ceri	21.67m	24.79m
James	22.12m	24.65m
Gurpit	22.45m	21.89m
Natasha	23.57m	22.68m
Alice	22.56m	23.13m

Practice Sheet Hot

Adding decimals

Add each pair of numbers to find an exact total.

1. $67.8 + 35.9$ 2. $45.8 + 26.7$ 3. $5.42 + 6.37$ 4. $4.48 + 3.27$

5. $5.63 + 2.84$ 6. $6.57 + 2.48$ 7. $7.85 + 4.56$ 8. $37.2 + 4.28$

9. $24.6 + 3.84$ 10. $47.4 + 8.7$ 11. $3.78 + 21.8$ 12. $45.5 + 2.52$

How accurate were your estimates?

Challenge

Janie says that adding 36.2 to 9.77 gives an answer of 133.9.
What advice would you give her?

Practice Sheet Hot

Long jump results

Who do you think won the long jump event?
Find the total of the three jumps for each athlete.
Then rank the athletes.

Athlete	1st jump	2nd jump	3rd jump
Sunita	3.45m	3.28m	3.64m
Dylan	2.87m	3.14m	2.96m
Faith	2.92m	3.04m	2.97m
Lee	3.07m	3.26m	3.18m
Toby	3.46m	3.19m	3.24m
Abbie	3.27m	3.54m	3.27m

Challenge

Zane has just beaten the winner by a total of 16cm!
He never jumped less than 3.00m - what could be the distances for his three jumps?

Practice Sheets Answers

Adding decimals (mild)

1. $34.5 + 27.3 = 61.8$
2. $62.7 + 23.5 = 86.2$
3. $24.8 + 43.9 = 68.7$
4. $46.7 + 25.5 = 72.2$
5. $47.8 + 34.4 = 82.2$
6. $5.42 + 6.37 = 11.79$
7. $4.48 + 3.27 = 7.75$
8. $5.63 + 2.84 = 8.47$
9. $6.57 + 2.48 = 9.05$
10. $7.85 + 4.56 = 12.41$

Shot put results (mild)

Athlete	1st throw	2nd throw	Total	Rank
Ceri	21.67m	24.79m	46.46m	2
James	22.12m	24.65m	46.77m	1
Gurpit	22.45m	21.89m	44.34m	5
Natasha	23.57m	22.68m	46.25m	3
Alice	22.56m	23.13m	45.69m	4

Adding decimals (hot)

1. $67.8 + 35.9 = 103.7$
2. $45.8 + 26.7 = 72.5$
3. $5.42 + 6.37 = 11.79$
4. $4.48 + 3.27 = 7.75$
5. $5.63 + 2.84 = 8.47$
6. $6.57 + 2.48 = 9.05$
7. $7.85 + 4.56 = 12.41$
8. $37.2 + 4.28 = 41.48$
9. $24.6 + 3.84 = 28.44$
10. $47.4 + 8.7 = 56.1$
11. $3.78 + 21.8 = 25.58$
12. $45.5 + 2.52 = 48.02$

Challenge

Janie says that adding 36.2 to 9.77 gives an answer of 133.9. What advice would you give her? Janie has taken out the decimal point, added the numbers to give completely the wrong answer. She should have used column addition taking care to line up the columns and the decimal point.

Long jump results (hot)

Athlete	1st jump	2nd jump	3rd jump	Total	Rank
Sunita	3.45m	3.28m	3.64m	10.37m	1
Dylan	2.87m	3.14m	2.96m	8.97m	5
Faith	2.92m	3.04m	2.97m	8.93m	6
Lee	3.07m	3.26m	3.18m	9.51m	4
Toby	3.46m	3.19m	3.24m	9.89m	3
Abbie	3.27m	3.54m	3.27m	10.08m	2

Challenge

Zane's total for his 3 jumps is 10.53m.

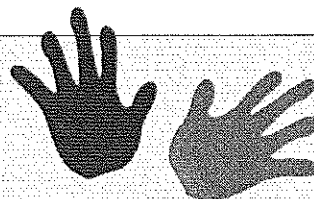
Answers where all 3 jumps are more than 3.00m and add up to 10.53m, e.g.
 $3.47\text{m} + 3.38\text{m} + 3.68\text{m}$ are acceptable.

A Bit Stuck? Dancing decimals

Work in pairs

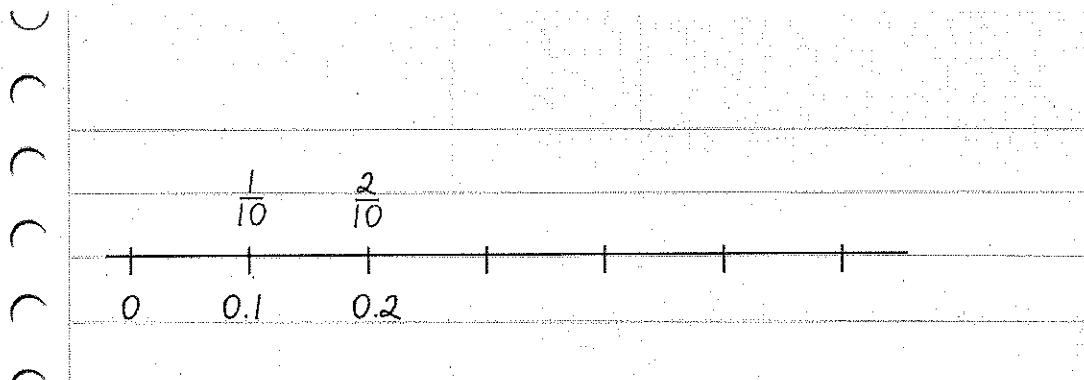
Things you will need:

- a pencil
- an enlarged 0 to 3 number line
- a whiteboard and pen



What to do:

- Look at the long number line, stretching from zero to three. Label each division on the scale, writing decimals below the line and fractions above the line.



S-t-r-e-t-c-h:

Can you think of another way we could write $\frac{5}{10}$?

What about $\frac{15}{10}$? $\frac{11}{2}$? $\frac{25}{10}$? $\frac{21}{2}$?

Where does $\frac{1}{4}$ appear on the line?

What about $\frac{3}{4}$?

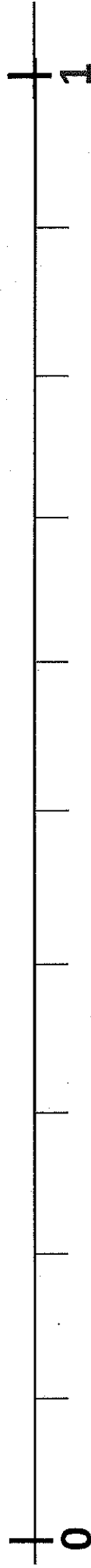
Do you know the decimal equivalents for these fractions?

Learning outcomes:

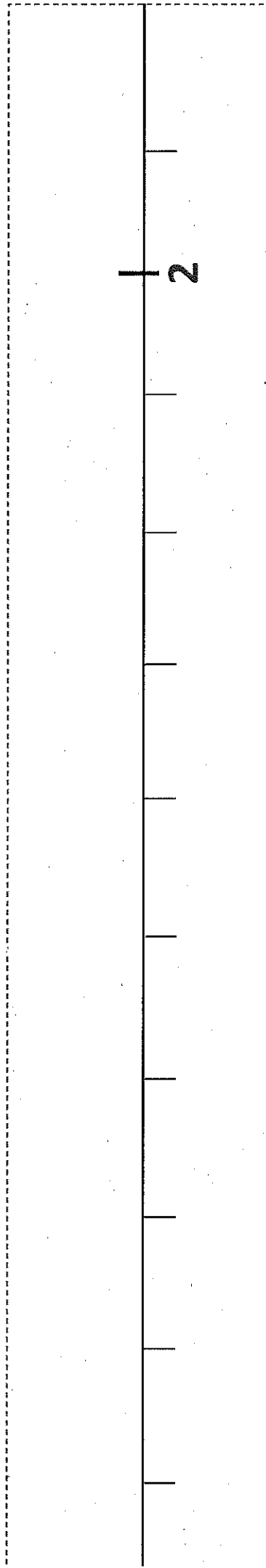
- I can place any number of tenths on a 0 to 3 landmarked number line.
- I can count on and back in tenths between 0 and 3.
- I am beginning to recognise and recall fractions and decimals equivalent to tenths.

A Bit Stuck?
Dancing decimals

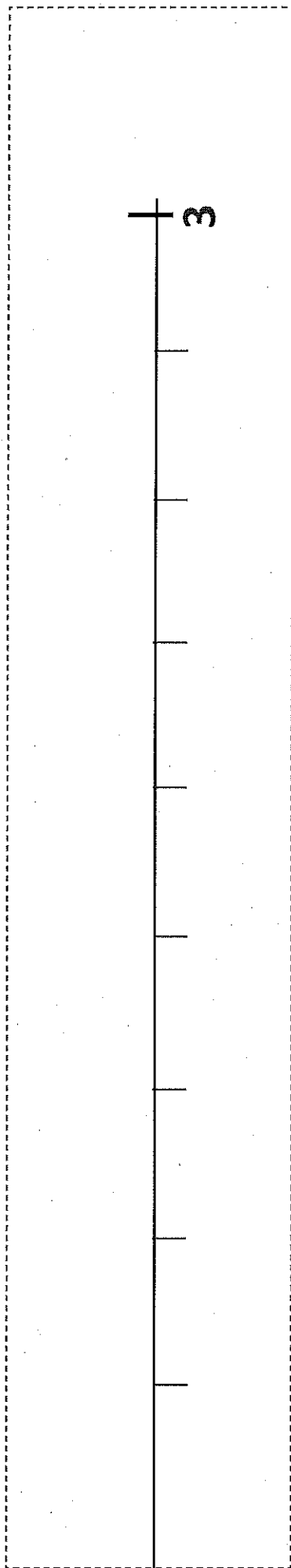
Cut out this number line, then glue it together carefully.



A Bit Stuck?
Dancing decimals



A Bit Stuck?
Dancing decimals



Check your understanding

Questions

Sometimes/ Always/ Never... 'If you add two 2-place decimal numbers, the answer also has 2 decimal places.'

Jamie added 6.77 to a number and his answer was 20. What number did he start with?

Ali's homework might need correcting... Correct any he has wrong and say what he did wrong.

2.75	3.42
+ 5.95	+ 5.57
<u>7.60</u>	<u>8.99</u>
4.83	2.47
+ 1.93	+ 68.5
<u>5.76</u>	<u>93.2</u>

Fold here to hide answers:

Check your understanding

Answers

Sometimes/ Always/ Never... 'If you add two 2-place decimal numbers, the answer also has 2 decimal places.'

Sometimes, e.g. $1.43 + 3.51 = 4.94$ but not if the last 2 digits add to 10, e.g. $3.44 + 2.36 = 5.8$

Jamie added 6.77 to a number and his answer was 20. What number did he start with?

13.23 – probably best solved by counting up from 6.77

Ali's homework might need correcting... Correct any he has wrong and say what he did wrong.

$2.75 + 5.95$ should be 8.70 and $4.83 + 1.93$ should be 6.76. In each case, he has not noted the extra 1s digits when the column totals more than 10. These are best set out with a space above the answer line for extra digits.

3.4.2 has a 'mysterious' extra decimal point. The total for $3.42 + 5.57$ is correct.

$2.47 + 68.5$ should be 70.97, he has misaligned the digits.

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Read the first part of the poem 'Skimbleshanks'

- How easy is it to read? Underline any tricky vocabulary. Can you practise reading so that you can find the rhythm of the poem?

2. Listen to two performances of the poem.

- Play the first part of each of these performances. Follow the words as you do. What are some of the differences between the two performances? Which do you prefer? Why?

https://www.youtube.com/watch?v=pLEeHj6e_Y

<https://www.youtube.com/watch?v=EKY5ag8qhlQ>

3. Practise parentheses

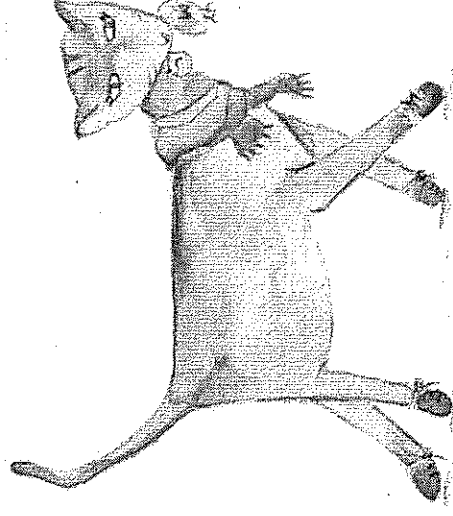
Use the *Revision Card* to remind yourself about commas, brackets and dashes for parentheses. Complete *Skimbleshanks Sentences 1, 2 and 3*. They get harder, so challenge yourself to keep going!

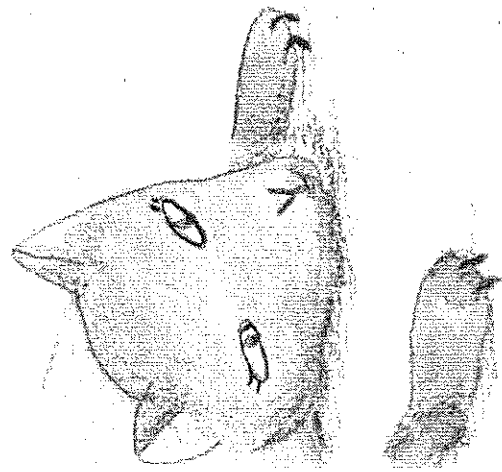
Try these Fun-Time Extras

- Try learning some of the first part of the poem off by heart.
- Make a picture of Skimbleshanks at his railway station.
- Find out and read some more of TS Eliot's Cat Poems. You might like to search for Macavity or Old Deuteronomy.

Skimbleshanks – Part 1

There's a whisper down the line at 11.39
When the Night Mail's ready to depart,
Saying "Skimble where is Skimble has he gone to hunt the thimble?
We must find him or the train can't start."
All the guards and all the porters and the stationmaster's daughters
They are searching high and low,
Saying "Skimble where is Skimble for unless he's very nimble
Then the Night Mail just can't go."
At 11.42 then the signal's nearly due
And the passengers are frantic to a man -
Then Skimble will appear and he'll saunter to the rear:
He's been busy in the luggage van!
He gives one flash of his glass-green eyes
And the signal goes "All Clear!"
And we're off at last for the northern part
Of the Northern Hemisphere!





You may say that by and large it is Skimble who's in charge

Of the Sleeping Car Express.

From the driver and the guards to the bagmen playing cards

He will supervise them all, more or less.

Down the corridor he paces and examines all the faces

Of the travellers in the First and the Third;

He establishes control by a regular patrol

And he'd know at once if anything occurred.

He will watch you without winking and he sees what you are thinking

And it's certain that he doesn't approve

Of hilarity and riot, so the folk are very quiet

When Skimble is about and on the move.

You can play no pranks with Skimbleshanks!

He's a Cat that cannot be ignored;

So nothing goes wrong on the Northern Mail

When Skimbleshanks is aboard.

By TS Eliot

Revision Card

Parenthesis

- Parenthesis is extra information added into a complete sentence.
- The original sentence makes sense without it.
- The extra information can be separated using commas, brackets or dashes.

Skimbleshanks is indispensable to the railway.

Skimbleshanks, an ever reliable character, is indispensable to the railway.

extra added information



Commas

Commas are used often – they do not draw much attention to the extra information and hardly break up the sentence at all.

Everyone looked for Skimbleshanks around the station.

Everyone looked for Skimbleshanks, the cat of the railway train, around the station.

extra added information

Brackets

Brackets are used to draw more attention to the additional information. The reader knows that they are being told something extra.

The eyes of Skimbleshanks are always watching.

The eyes of Skimbleshanks (whose attention is complete) are always watching.

The writer might want to draw attention to important or funny extra information.
Skimbleshanks (who likes a drop of whisky in his tea) never stops watching.



Dashes

Dashes are commonly used in informal writing. They break up the sentence more than commas or brackets, and therefore draw attention to the extra information.

We started to behave when we saw old Skimbleshanks coming towards us!

We started to behave when we saw old Skimbleshanks—that terror of the train—coming towards us!

extra added information



Skimbleshanks Sentences 1

- Add information to these sentences, using parenthesis.
- Put the extra information in the place marked with an arrow.
- Choose punctuation to make your addition clear.
- There are suggestions (underneath) of phrases to add.
- Be careful, because these suggestions are in the wrong order.

1. The train ↑ was ready at 11.39.
2. Nobody knew where Skimbleshanks ↑ had gone.
3. Everybody ↑ searched hard for him.
4. The passengers ↑ grew frantic.
5. Skimble appeared and walked ↑ to the back of the train.

Suggested phrases

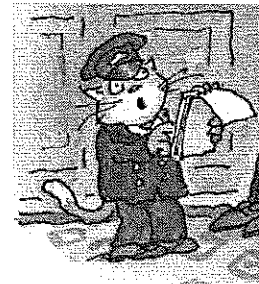
sauntering calmly

who were waiting inside the train

the cat of the railway train

which was full of passengers

even the stationmaster's daughters



Skimbleshanks Sentences 2

- *Add information to these sentences using parenthesis.*
- *You will have to decide where to put the extra information.*
- *Choose punctuation to make your addition clear.*
- *There are suggestions (underneath) of phrases to add. They are in the right order.*

1. Skimbleshanks gave a flash of his eyes to set the train going.
2. The driver watched for the signal then started the journey
3. The train was travelling to the north through the night
4. Everybody respects Skimbleshanks.
5. Skimbleshanks patrols the corridors

Suggested phrases

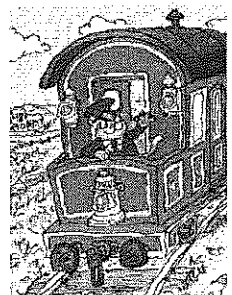
glass-green and bright

in order to be safe

to Scotland

drivers, guards and bagmen

establishing control as he goes



Skimbleshanks Sentences 3

- *Add information to these sentences, using parenthesis.*
- *You will have to decide what extra information to add and where, in the sentence, to add it.*
- *Choose punctuation to make your addition clear.*

1. Skimbleshanks can see what you are thinking.

2. Everybody stays very quiet.

3. Pranks are not allowed.

4. Ignoring Skimbleshanks is not possible.

5. Nothing goes wrong on the Northern Mail.

Make up some sentences (including parenthesis) of your own about Skimbleshanks.

Possible Answers - Skimbleshanks Sentences 1 and 2

1. The train, which was full of passengers, was ready at 11.39.
2. Nobody knew where Skimbleshanks, the cat of the railway train, had gone.
3. Everybody – even the stationmaster's daughters - searched hard for him.
4. The passengers (who were waiting inside the train) grew frantic.
5. Skimble appeared and walked, sauntering calmly, to the back of the train.

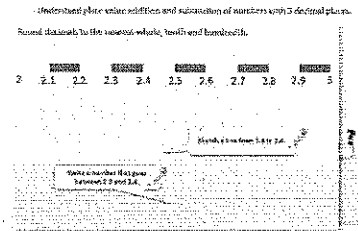
1. Skimbleshanks gave a flash of his eyes, glass-green and bright, to set the train going.
2. The driver watched for the signal (in order to be safe) then started the journey
3. The train was travelling to the north through the night – to Scotland.
4. Everybody - drivers, guards and bagmen - respects Skimbleshanks.
5. Skimbleshanks, establishing control as he goes, patrols the corridors

Year 5: Week 1, Day 5

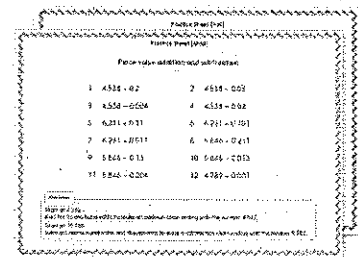
Counting up to find change and money differences

Each day covers one maths topic. It should take you about 1 hour or just a little more.

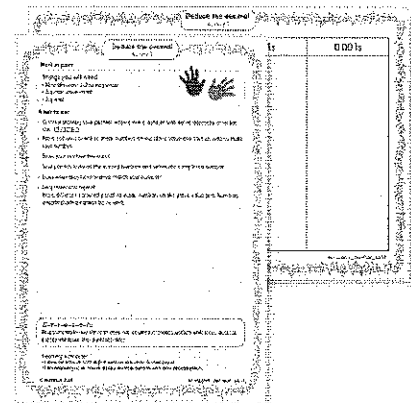
1. Start by reading through the Learning Reminders. They come from our *PowerPoint* slides.



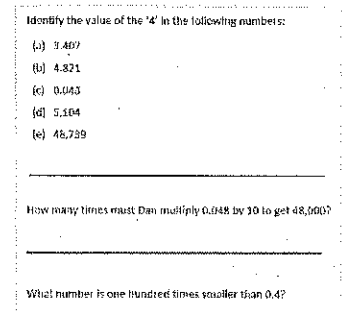
2. Tackle the questions on the Practice Sheet. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



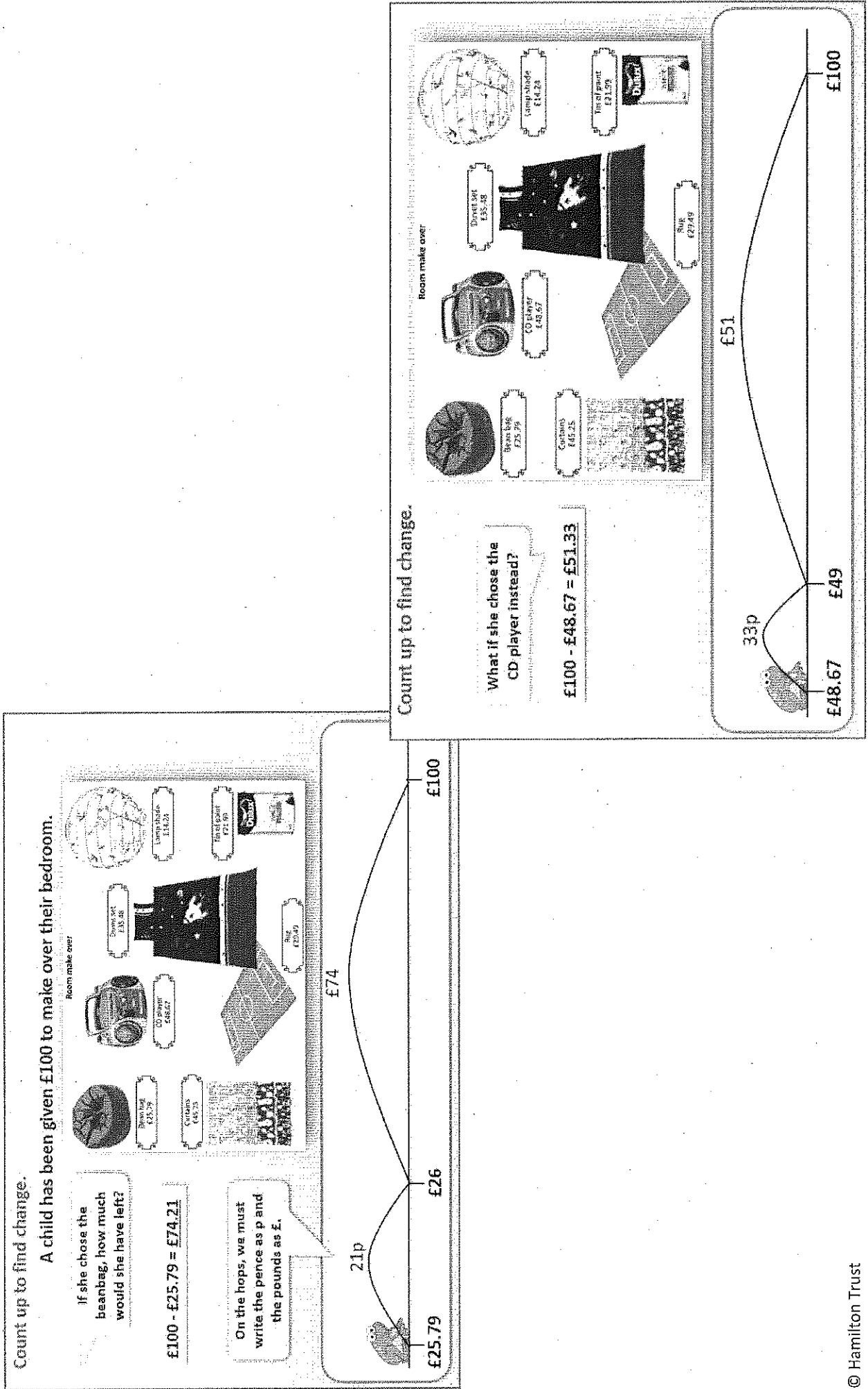
3. Finding it tricky? That's OK... have a go with a grown-up at A Bit Stuck?



4. Have I mastered the topic? A few questions to Check your understanding. Fold the page to hide the answers!



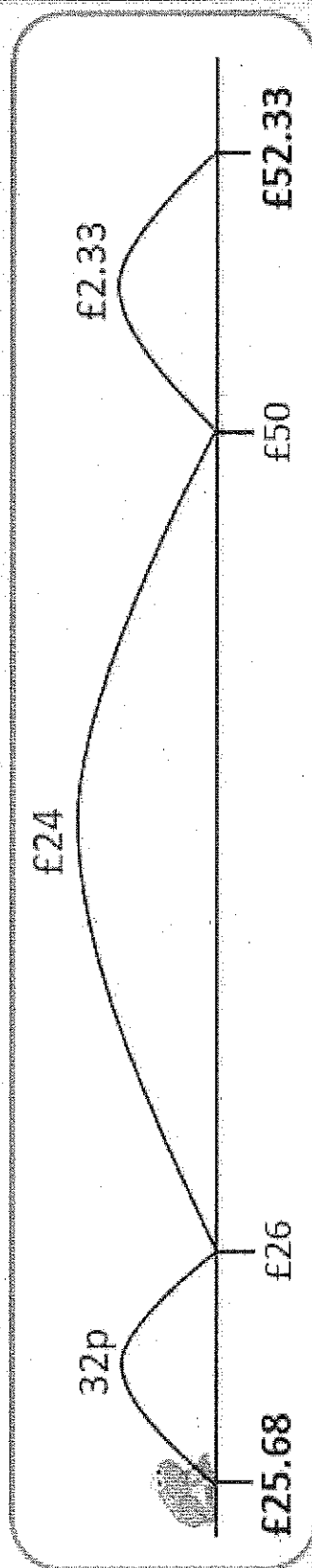
Learning Reminders



Learning Reminders

Count up to find money differences.

Hannah has £25.68 in the bank. Jessie has £52.33.
How much more does Hannah need to save to have the same amount as Jessie?



Add the hops:

$$£24 + £2.33 + 32p = £26.65$$

So, Hannah needs to save

$$£52.33 - £25.68 = £26.65$$

Practice Sheet for All

Finding change

Find the change from £50.

1. £47.89

2. £35.76

3. £37.28

4. £23.17

Find the change from £100.

5. £74.89

6. £84.25

7. £64.38

8. £25.47

Find the total and then the change from £100.

9. £45.23 + £24.68

10. £52.78 + £23.42

11. £36.46 + £27.35

12. £54.29 + £16.47

Challenge

Find the total and then the change from £100:

13. £24.63 + £17.24 + £25.09

14. £34.67 + £28.49 + £18.24

Practice Sheet Mid

Estimating differences

Estimate the answers to these subtractions and write them in the correct column:
 $\pounds 29.25 - \pounds 25.99$ $\pounds 74.49 - \pounds 69.99$ $\pounds 23.35 - \pounds 18.75$ $\pounds 23.75 - \pounds 18.25$ $\pounds 42.65 - \pounds 38.49$ $\pounds 54.29 - \pounds 48.95$
 Then calculate each answer to check. Draw an arrow to show if a calculation needs to move to another column.

<£5	>£5

Challenge

Now write your own two subtractions to go in each column. Each digit must be different in each price.

Practice Sheet Hot

Estimating differences

Estimate the answers to these subtractions and write them in the correct column:

£72.45 - £63.79 £58.36 - £38.17 £56.83 - £34.36 £61.46 - £41.27
 £94.34 - £72.82 £83.21 - £63.45 £110.34 - £89.79 £103.38 - £83.65

Then calculate each answer to check. Draw an arrow to show if a calculation needs to move to another column.

<£20	>£20

Challenge

Now write your own two subtractions to go in each column. Each digit must be different in each price.

Practice Sheets Answers

Finding change (Practice for all)

1. $£50 - £47.89 = £2.11$
2. $£50 - £35.76 = £14.24$
3. $£50 - £37.28 = £12.72$
4. $£50 - £23.17 = £26.83$

5. $£100 - £74.89 = £25.11$
6. $£100 - £84.25 = £15.75$
7. $£100 - £64.38 = £35.62$
8. $£100 - £25.47 = £74.53$

9. $£45.23 + £24.68 = £69.91$
 $£100 - £69.91 = £30.09$

10. $£52.78 + £23.42 = £76.20$
 $£100 - £76.20 = £23.80$

11. $£36.46 + £27.35 = £63.81$
 $£100 - £63.81 = £36.19$

12. $£54.29 + £16.47 = £70.76$
 $£100 - £70.76 = £29.94$

Challenge

13. $£24.63 + £17.24 + £25.09 = £66.96$
 $£100 - £66.96 = £33.04$

14. $£34.67 + £28.49 + £18.24 = £81.40$
 $£100 - £81.40 = £18.60$

Estimating differences (mild)

<£5	>£5
$£29.25 - £25.99 = £3.26$ $£74.49 - £69.99 = £4.50$ $£23.35 - £18.75 = £4.60$ $£42.65 - £38.49 = £4.16$	$£23.75 - £18.25 = £5.50$ $£54.29 - £48.95 = £5.34$

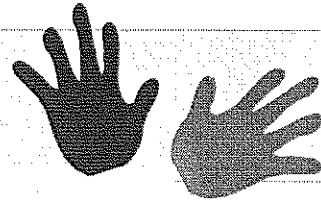
Estimating differences (hot)

<£20	>£20
$£72.45 - £63.79 = £8.66$ $£83.21 - £63.45 = £19.76$ $£103.38 - £83.65 = £19.73$	$£58.36 - £38.17 = £20.19$ $£56.83 - £34.36 = £22.47$ $£61.46 - £41.27 = £20.19$ $£94.34 - £72.82 = £21.52$ $£110.34 - £89.79 = £20.55$

A Bit Stuck? Change challenge

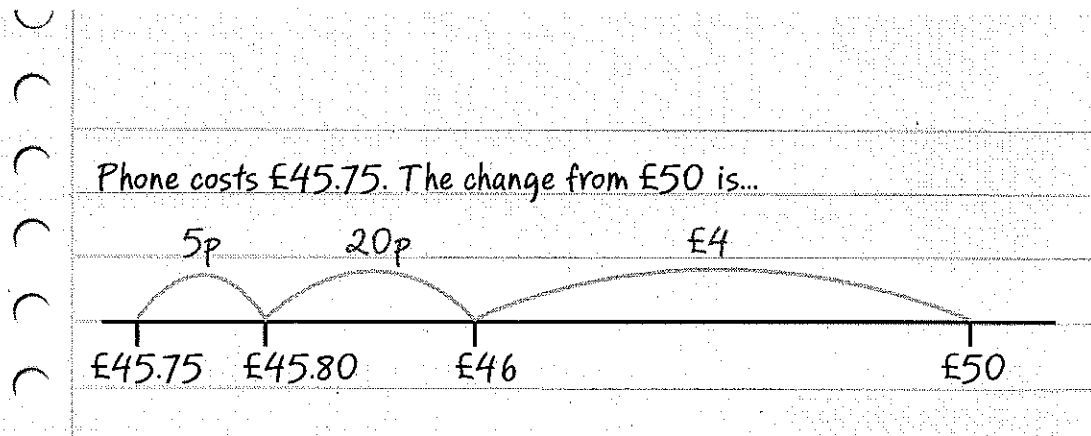
Things you will need:

- A pencil



What to do:

- Use Frog to help you to work out the change from £50 for as many items as you can! Draw a number line jotting starting at the price and ending at £50. Think where Frog will hop to on the way. Remember to add up your hops and jumps at the end!



Finally, complete the bar models on the next page.

S-t-r-e-t-c-h:

Find the change from £50.

1.



£36.85

2.



£25.79

Learning outcomes:

- I can use Frog to find the change from £50 (items priced between £40 and £50).
- I am beginning to use Frog to find the change from £50 (items priced less than £40).

A Bit Stuck? Change challenge



£45.75

£50	
£45.75	?



£41.29

£50	
£41.29	?



£48.37

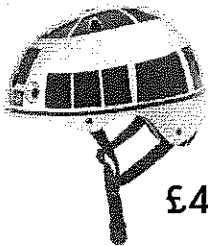
£50	
£48.37	?



£42.47



£40.65



£43.48



£47.83

Check your understanding

Questions

Kyla received £7.29 change from a £20 note. How much did she spend?

Has the shopkeeper given the correct change?

1. Item bought: £13.45

Paid with: £50

Change given: £36.55

2. Item bought: £64.79

Paid with: £100

Change given: £45.31

Write the missing digits: $£75 - £24.\square6 = £\square\square.14$

Write two amounts with a difference of £34.76. The larger amount has 23p.

Fold here to hide answers:

Check your understanding

Answers

Kyla received £7.29 change from a £20 note. How much did she spend? £12.71. This is probably best-found (as many of the answers here) by counting up from the smaller to larger number (Frog).

Has the shopkeeper given the correct change?

1. Item bought: £13.45

Paid with: £50

Change given: £36.55

This is correct.

2. Item bought: £64.79

Paid with: £100

Change given: £45.31

Incorrect; should be £35.21.

Write the missing digits: $£75 - £24.86 = £50.14$

Write two amounts with a difference of £34.76. The larger amount has 23p. £76.23 and £41.47, £75.23 and £40.47 etc. Choose the starting amount and subtract £34.76 to solve this.

What to do today

IMPORTANT Parent or Carer – Read this page with your child and check that you are happy with what they have to do and any weblinks or use of internet.

1. Watch a video about a train to London.

- Watch the video of the sleeper train to London.
<https://www.youtube.com/watch?v=0ZWHVRx-6xo>
- Make notes about 5 things that you learn – you can watch it more than once. Would you like to go on this journey? Why?

2. Read the second part of *Skimbleshanks*.

- Read *Skimbleshanks – Part 2*. Listen to your favourite performance from Day 4.
https://www.youtube.com/watch?v=pLEeHj6e_Y
<https://www.youtube.com/watch?v=EKY5ag8qhlQ>
- Highlight any of the vocabulary in the poem that you are not sure about. You can look up words at <https://kids.wordsmyth.net/we/>

3. Practise parentheses

Use the *Revision Card* to remind yourself about commas, brackets and dashes for parentheses. Complete *Skimbleshanks Vocabulary*. These are sentences about the vocabulary in the poem but they need commas, brackets or dashes.

Try these Fun-Time Extras

- Try learning some of the second part of the poem off by heart.
- Use the *Railway Times* template to make a newspaper article about *Skimbleshanks*.

Skimbleshanks – Part 2

Oh, it's very pleasant when you have found your little den
With your name written up on the door.
And the berth is very neat with a newly folded sheet
And there's not a speck of dust on the floor.
There is every sort of light - you can make it dark or bright;
There's a handle that you turn to make a breeze.
There's a funny little basin you're supposed to wash your face in
And a crank to shut the window if you sneeze.
Then the guard looks in politely and will ask you very brightly
"Do you like your morning tea weak or strong?"
But Skimble's just behind him and was ready to remind him,
For Skimble won't let anything go wrong.
And when you creep into your cosy berth
And pull up the counterpane,
You ought to reflect that it's very nice
To know that you won't be bothered by mice -
You can leave all that to the Railway Cat,
The Cat of the Railway Train!



In the watches of the night he is always fresh and bright;

Every now and then he has a cup of tea
With perhaps a drop of Scotch while he's keeping on the watch,

Only stopping here and there to catch a flea.

You were fast asleep at Crewe and so you never knew

That he was walking up and down the station;

You were sleeping all the while he was busy at Carlisle,

Where he greets the stationmaster with elation.

But you saw him at Dumfries, where he speaks to the police

If there's anything they ought to know about:

When you get to Gallowgate there you do not have to wait--

For Skimbleshanks will help you to get out!

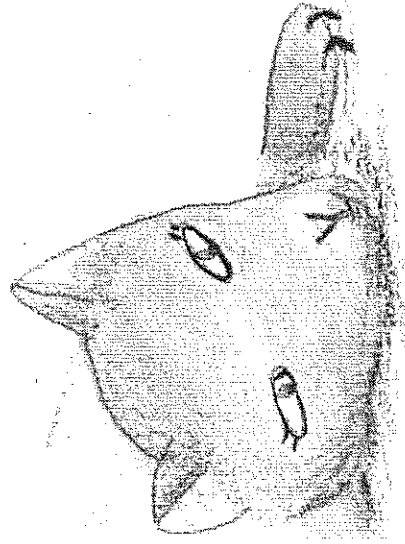
He gives you a wave of his long brown tail

Which says: "I'll see you again!

You'll meet without fail on the Midnight Mail

The Cat of the Railway Train.

By T.S. Eliot



Revision Card

Parenthesis

- Parenthesis is extra information added into a complete sentence.
- The original sentence makes sense without it.
- The extra information can be separated using commas, brackets or dashes.

Skimbleshanks is indispensable to the railway.

Skimbleshanks, an ever reliable character, is indispensable to the railway.

extra added information

complete sentence



Commas

Commas are used often – they do not draw much attention to the extra information and hardly break up the sentence at all.

Everyone looked for Skimbleshanks around the station.

Everyone looked for Skimbleshanks, the cat of the railway train, around the station.

extra added information

complete sentence



Brackets

Brackets are used to draw more attention to the additional information. The reader knows that they are being told something extra.

The eyes of Skimbleshanks are always watching.

The eyes of Skimbleshanks (whose attention is complete) are always watching.

The writer might want to draw attention to important or funny extra information.
Skimbleshanks (who likes a drop of whisky in his tea) never stops watching.

complete sentence

extra added information



Dashes

Dashes are commonly used in informal writing. They break up the sentence more than commas or brackets, and therefore draw attention to the extra information.

We started to behave when we saw old Skimbleshanks coming towards us!

We started to behave when we saw old Skimbleshanks – that terror of the train – coming towards us!

extra added information

complete sentence



Skimbleshanks Vocabulary

Rewrite these sentences adding punctuation to make the meaning clearer. Decide whether to use commas, brackets or dashes.

Think about end of sentence punctuation too!

1. Third-class train tickets which originally meant that passengers were transported in an open box car were ended in 1956
2. The Northern hemisphere the part of the planet north of the equator has ninety percent of the world's population
3. In the event of an accident or other emergency a train guard can take charge of the train
4. Scotch is a drink an alcoholic one made in Scotland
5. Fleas those small flightless insects can jump around thirty thousand times in a row
6. Have you or anyone you know ever visited Crewe or Carlisle
7. Elation which is a state of great happiness and exhilaration could be a response to seeing an especially good friend
8. The national police force for the railways the British Transport police look after six million passengers every day
9. A fixed bunk on a means of transport particularly a ship or a train is often called a berth
10. A counterpane is a type of bedspread a bit like a duvet popular particularly in the first half of twentieth century



RAILWAY TIMES



Skimbleshanks Vocabulary – Possible Answers

1. Third-class train tickets, which originally meant that passengers were transported in an open box car, were ended in 1956.
2. The Northern hemisphere, the part of the planet north of the equator, has ninety percent of the world's population!
3. In the event of an accident (or other emergency) a train guard can take charge of the train.
4. Scotch is a drink - an alcoholic one - made in Scotland.
5. Fleas (those small flightless insects) can jump around thirty thousand times in a row!
6. Have you, or anyone you know, ever visited Crewe or Carlisle?
7. Elation, which is a state of great happiness and exhilaration, could be a response to seeing an especially good friend.
8. The national police force for the railways (the British Transport police) look after six million passengers every day.
9. A fixed bunk on a means of transport, particularly a ship or a train, is often called a berth.
10. A counterpane is a type of bedspread - a bit like a duvet - popular particularly in the first half of twentieth century.

Reasoning and Problem Solving Perimeter and Area Consolidation – Year 5

National Curriculum Objectives:

Mathematics Year 5: (5M7a) Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

Mathematics Year 5: (5M7b) Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes

About This Resource:

This resource is aimed at Year 5 Expected and has been designed to give children the opportunity to consolidate the skills they have learned in Autumn Block 5 – Geometry Perimeter and Area.

The questions are based on a selection of the same 'small steps' that are addressed in the block, but are presented in a different way so children can work through the pack independently and demonstrate their understanding and skills.

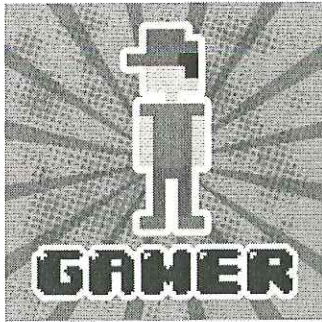
Small Steps:

Calculate Perimeter
Area of rectangles
Area of compound shapes

More Year 5 Perimeter and Area resources

Did you like this resource? Don't forget to review it on our website.

Reasoning and Problem Solving
Perimeter and Area Consolidation – Year 5



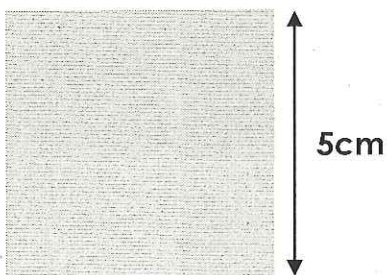
Your friend has invited you to play on a live stream computer game where you can split the screen and compare activity.

The aim of the game is to gain points through creative use of shapes.

PRESS START

LEVEL ONE

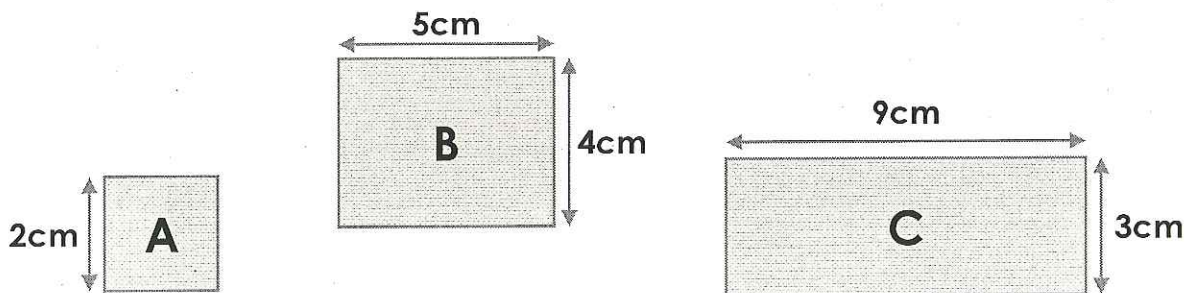
1. Your friend has created this square and gains 1 point per cm in the perimeter. What's the score to beat?



2. You are given a rectangle with one short side set at 3cm. How long will you need to make the long side to beat your friend's score?

LEVEL TWO

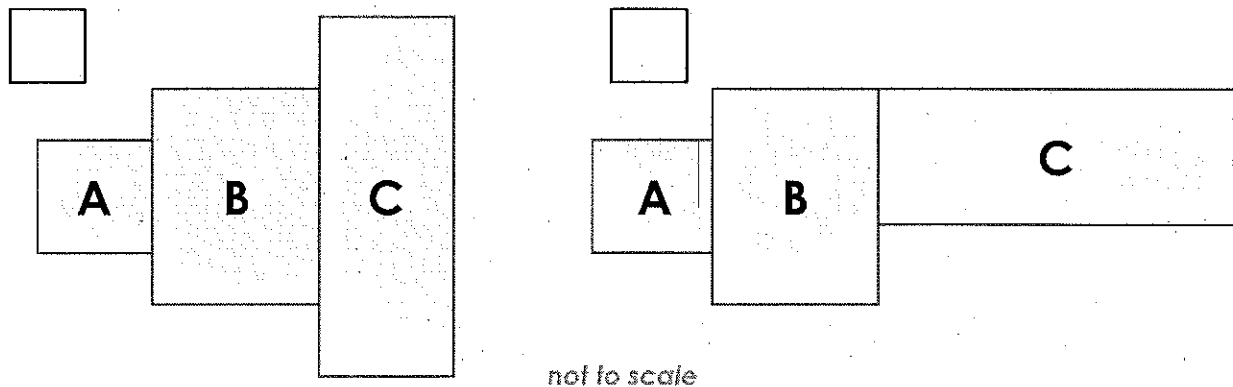
Next up is compound shapes. This is trickier as you are both given the same shapes.



not to scale

Reasoning and Problem Solving
Perimeter and Area Consolidation – Year 5

3. Which configuration will give you the largest perimeter and win you the most points?
Tick a box to show your choice.



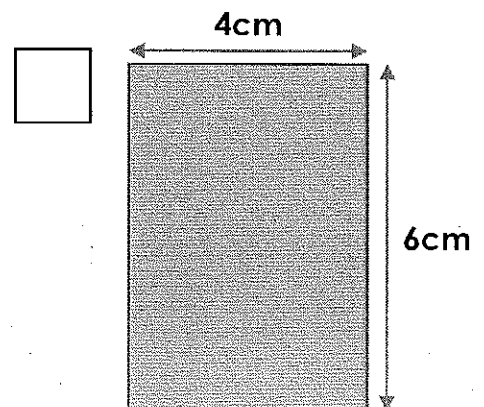
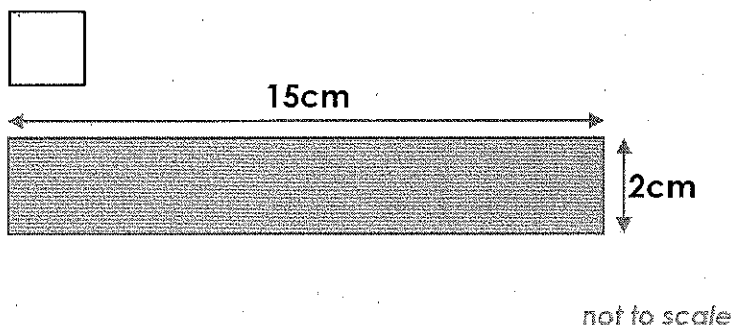
To level up, use the measurements to calculate the perimeter of your chosen shape.

LEVEL UP!!!

LEVEL THREE

You've reached the penultimate level! The rules change, and area is your next challenge.

4. Below is the split screen with you on the left. Tick who has won.

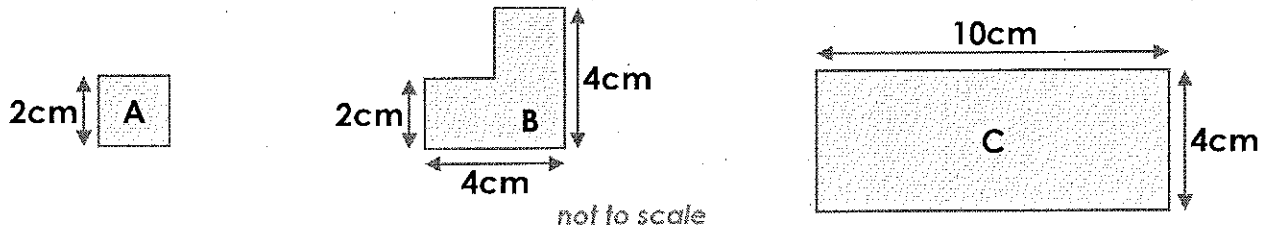


What was the winning score?

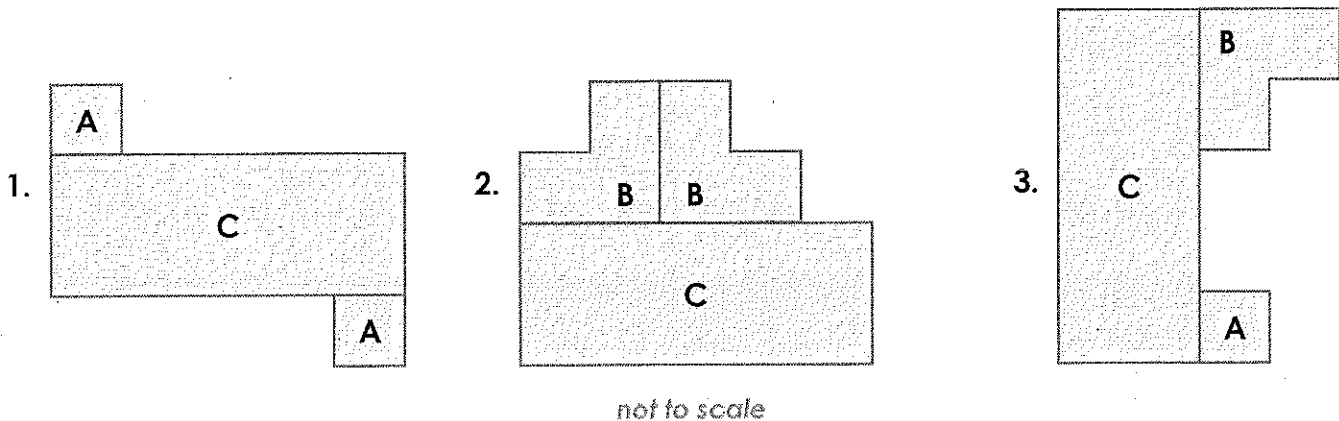
Reasoning and Problem Solving
Perimeter and Area Consolidation – Year 5

LEVEL FOUR

It's down to the final task: area of compound shapes!
You have been given the following shapes:



5. You can use a maximum of three shapes.
Which configuration below will give you the highest score?

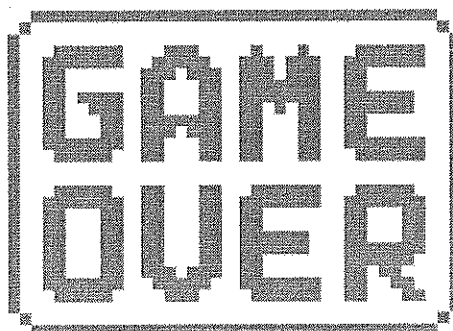


Area of 1 =

Area of 2 =

Area of 3 =

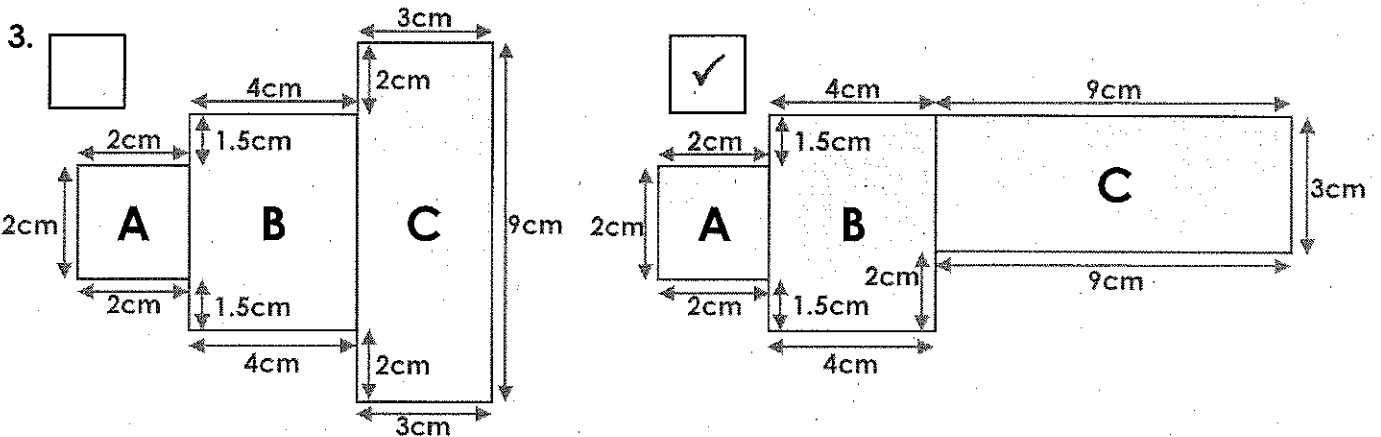
Highest Score =



You did it! Master of perimeter and area... who will YOU challenge next?

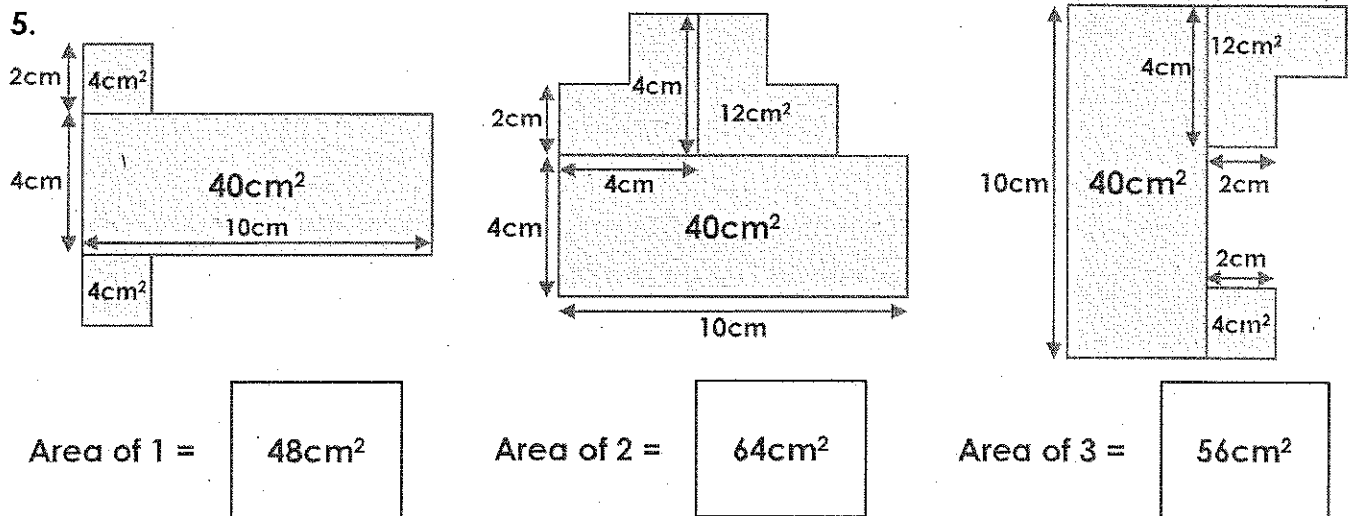
Reasoning and Problem Solving
Perimeter and Area Consolidation – Year 5

1. Need to beat 20 points ($5\text{cm} + 5\text{cm} + 5\text{cm} + 5\text{cm} = 20\text{cm}$)
2. A rectangle with 2 sides of 3cm will need the other two lengths to be 7.5cm to get points of 21 ($3\text{cm} + 3\text{cm} + 7.5\text{cm} + 7.5\text{cm} = 21\text{cm}$)



The first shape's perimeter = 36cm . The second shape's perimeter = 40cm .

4. The first shape has won because it is larger with an area of 30cm^2 (15×2). The second shape's area is 24cm^2 (4×6).



Shape 2 will give you the highest score with an area of 64cm^2 .

