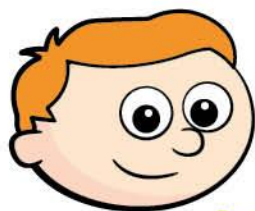


Autumn Block 2

Addition and subtraction



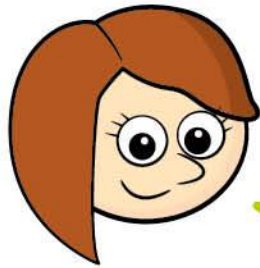
If I add
or subtract a multiple of
10, the only place value
columns that might
change are the tens
and hundreds.

Do you agree with Ron?

Explain your reasons.



Rosie is finding the missing number in $\underline{\quad} - 300 = 2,895$



$$2,895 - 300 = 2,595$$

What mistake has Rosie made?

Work out the missing number.



Here is a number on a place value chart.

| Th | H | T | O |
|----|--------------------------|-------------------------------|-----|
| ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● ● | ● ● |

I am going to add two counters to a column and then remove one counter from a column.



What number could Tiny have now?

Tiny works out $1,234 + 345$

The answer
is 4,684



What mistake has Tiny made?

What is the correct answer?





Dani and Aisha are raising money for charity.

Dani raises £2,304 and Aisha raises £1,695

How much money have they raised altogether?

Scott and Tom are also raising money for charity.

So far, Scott has raised £1,423 and Tom has raised £121 more than Scott.

How much have Scott and Tom raised altogether?

Scott \longleftrightarrow 121

Tom

Compare methods with a partner.





Tiny completes this addition.

| | | Th | H | T | O | |
|--|---|----|---|---|---|--|
| | | 4 | 0 | 8 | 6 | |
| | + | 1 | 5 | 3 | 2 | |
| | | 5 | 5 | 1 | 9 | |
| | | | | | 1 | |

What mistake has Tiny made?

Find the correct answer.



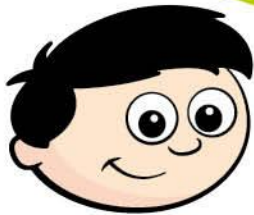
What is the missing 4-digit number?

| | | | | | | |
|--|---|-----------|----------|----------|----------|--|
| | | | | | | |
| | | Th | H | T | O | |
| | | | | | | |
| | + | 6 | 3 | 9 | 5 | |
| | | 8 | 9 | 4 | 9 | |
| | | | | | | |



Dexter adds a 4-digit number to a 2-digit number.

The answer is 9,090



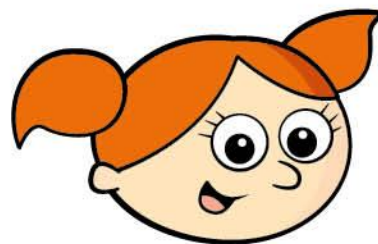
| | | Th | H | T | O | |
|--|---|----|---|---|---|--|
| | | | | | | |
| | | | | | | |
| | + | | | | | |
| | | 9 | 0 | 9 | 0 | |
| | | | | | | |

What could Dexter's numbers be?

Alex is working out this addition.

| | | Th | H | T | O | |
|-------|---|----|---|---|---|--|
| | | 1 | 3 | 6 | 4 | |
| | + | 1 | 2 | 3 | 7 | |
| <hr/> | | | | | | |
| <hr/> | | | | | | |
| | | | | | | |

I think there will be only one exchange in this calculation because only $4 + 7$ is greater than 9



Is Alex correct?

Explain how you know.





Teddy works out $3,218 + 1,354$

| | | Th | H | T | O | |
|--|---|----|---|---|---|--|
| | | 3 | 2 | 1 | 8 | |
| | + | 1 | 3 | 5 | 4 | |
| | | | | | | |
| | | | | 2 | | |

How do you know that Teddy's answer cannot be correct?

Rosie and Mo each have some points on a computer game.

Mo has 599 fewer points than Rosie.

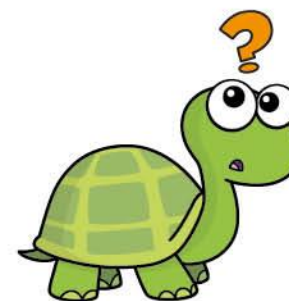
Mo has 4,278 points.

How many points do they have altogether?

Tiny is working out $3,426 - 1,213$ using place value counters.

Tiny keeps getting 3,426 as the answer.

| Th | H | T | O |
|----|---|---|---|
| | | | |
| | | | |
| | | | |



Explain Tiny's mistake.

Work out the correct answer.





Fill in the missing digits.

| | | | | | | |
|--|---|-----------|----------|----------|----------|--|
| | | | | | | |
| | | Th | H | T | O | |
| | | 9 | 9 | 9 | 9 | |
| | - | | | 8 | | |
| | | | 3 | | | |
| | | | | | | |

Compare answers with a partner.

Can you find any more?



The mass of a box is 2,479 g.

A teddy bear is 1,305 g lighter than the box.

What is the total mass of the teddy bear and the box?



1,235 people go on a school trip.

There are 1,179 children and 27 teachers.

The rest are parents.

How many parents are there?

Explain your method to a partner.



Find the missing numbers.

$$\underline{\hspace{2cm}} - 1,345 = 4_6$$

What is the greatest number that could go in the first space?

What is the smallest?

How many possible answers could you have?

What is the pattern between the numbers?

What method did you use?





The subtraction has exactly one exchange.

| | | Th | H | T | O | |
|--|---|----|---|---|---|--|
| | | 5 | 6 | 3 | 2 | |
| | - | | | | | |
| | | | | | | |
| | | | | | | |

What could the missing numbers be if the exchange is in the tens column?

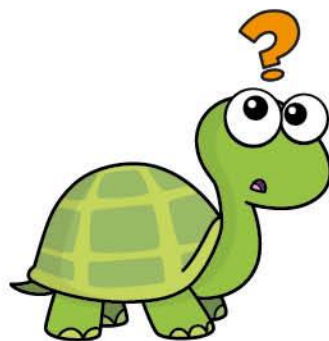
What if the exchange was in another column?

Talk about it with a partner.



Tiny has worked out $3,035 - 1,074$

| | | Th | H | T | O | |
|--|---|----------------|---|----------------|---|--|
| | | 2 3 | 0 | ¹ 3 | 5 | |
| | - | 1 | 0 | 7 | 4 | |
| | | 1 | 0 | 6 | 1 | |
| | | | | | | |



Do you agree with Tiny?

Explain your answer.





There were 2,114 visitors to a museum on Saturday.

650 more people visited the museum on Saturday than on Sunday.

Altogether, how many people visited the museum over the two days?

What do you need to do first to solve the problem?

Find the missing 4-digit number.

| | | | | | | |
|--|---|-----------|----------|----------|----------|--|
| | | | | | | |
| | | Th | H | T | O | |
| | | | | | | |
| | + | 4 | 6 | 7 | 8 | |
| | | 7 | 4 | 3 | 1 | |
| | | | | | | |

How did you find the answer?

Is there more than one way?



Dexter is working out $4,387 - 134$



Those numbers are not close together, so I need to use the column method.

| | | Th | H | T | O | |
|--|---|-------|---|---|---|--|
| | | 4 | 3 | 8 | 7 | |
| | - | | 1 | 3 | 4 | |
| | | <hr/> | | | | |
| | | <hr/> | | | | |
| | | | | | | |

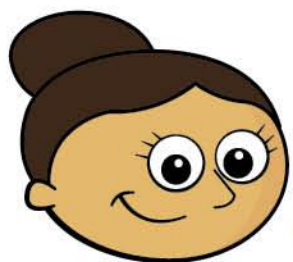
Do you agree with Dexter?

Explain your reasons.

What other methods could Dexter use?



Dora is working out $500 - 287$



I could subtract 1 to make my calculation easier, as I will not need to do any exchanges.

| | | | | | |
|--|---|----------|----------|----------|--|
| | | | | | |
| | | H | T | O | |
| | | 4 | 9 | 9 | |
| | - | 2 | 8 | 7 | |
| | | <hr/> | <hr/> | <hr/> | |
| | | 2 | 1 | 2 | |
| | | | | | |

What mistake has Dora made?

What is the correct answer?

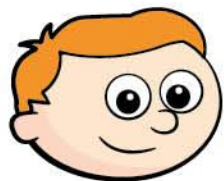
How else could you work out $500 - 287$?

The children are estimating the answer to $4,502 - 1,414$



$4,000 - 1,000 = 3,000$

Jack



Ron

$4,500 - 1,400 = 3,100$



$5,000 - 1,000 = 4,000$

Sam

Which children have rounded correctly?

What mistake has been made?

Whose calculation was easiest?

Whose estimate was most accurate?

Estimate answers



The estimated answer to a calculation is 3,400

The numbers in the calculation were rounded to the nearest hundred for the estimate.

What could the original calculation be?

Roll a 6-sided dice eight times.

Write each number in one of the boxes.

Now work out your addition.

| | | | | | | |
|--|---|----|---|---|---|--|
| | | | | | | |
| | | Th | H | T | O | |
| | | | | | | |
| | + | | | | | |
| | | | | | | |
| | | | | | | |

Compete against a partner. Who can get an answer closest to 5,000?

$$627 + \square = 943$$

I think the answer is 1,570



Show by estimating that Tiny has made a mistake.

What mistake has Tiny made?

Find the correct answer.

Complete an inverse operation to check your answer.



Tiny is completing some statements.

Check Tiny's answers.

Do you need to work out the answers or can an estimate help you decide whether Tiny is correct?

$$\begin{array}{l} 55 + 28 = \boxed{70} - 13 \\ 55 - 28 = 13 + \boxed{40} \\ 28 + \boxed{12} > 55 - 13 \\ 28 + 13 < 55 - \boxed{96} \end{array}$$

Find the correct answers.

Is there more than one possible answer for any of the statements?

