## Tuesday <br> Term 4 Week 2



## Subtraction

## WALT:

- Use a formal algorithm to subtract 5-6 digit numbers
- Display working out


## How to Use the Algorithm

We start with the column on the right. In this case, it's the ones column.
From the top down, check if you can subtract the numbers from each other.


How to Use the Algorithm

Yes we can do it. Let's solve it!

$$
7-4=3
$$

## How to Use the Algorithm

Put this answer under the line.
Now we move a column to the left (the tens column) and check if we can subtract these numbers.

## $2-5$

## How to Use the Algorithm

No. We need to borrow! Let's check the neighbour to the left.

## $2-\sum_{\text {tens }}$ No

## How to Use the Algorithm <br> ones



## How to Use the Algorithm

We borrow 1 hundred and squeeze it into the tens column making 12 tens.
We cross out the 5 hundreds and make it 4 hundreds.
Now we can solve it!

$$
12-5=7
$$

## How to Use the Algorithm

## Put this answer under the line.

Now we move a column to the left (the hundreds column) and subtract these numbers.

$$
4-2=2
$$

How to Use the Algorithm

Put this answer under the line.
The answer is 273.

> 5127 -254

R

## Solve these problems using the algorithm...

$$
\begin{array}{rrrr}
746 & \text { 1) } \\
-3288 & \text { 3) } \\
-334 \\
-487 & -466
\end{array}
$$

## Answers

> 3
> 3
> 2) 4138
> - 187
> 251
> 612
> 3) 7314
> -466
> 268

## 

Sometimes there might be a zero in the neighbouring column when you are trying to borrow.
In this example, we need to borrow from the tens column but it's empty!
We will need to borrow from the hundreds
 column which will then allow us to borrow from the tens column.

## A double borrow!

## Nothing to Borrow

We borrow 1 hundred and squeeze it into the tens column making 10 tens. We cross out the 4 hundreds and make it 3 hundreds.
We can now borrow from the tens column.
We borrow 1 ten and squeeze it into the ones column making 15 ones.
We cross out the 10 tens and make it 9 tens.

Nothing to Borrow
tens

## Now we can solve the problem.

39 4 1७15 - 167

Nothing to Borrow

Now we can solve the
Now we
problem.


Nothing to Borrow

Now we can solve the problem.


## Nothing to Borrow

The answer is 238.

## Solve these problems using the algorithm...

$$
\begin{array}{rrr}
\text { 1) } & 306 & \text { 2) } \\
-1783 & \text { з) } 8002 \\
\hline
\end{array}
$$

## Solve these problems using the algorithm...

29

1) $30^{1} 6$
$-178$ 128
49
799
2) 51013

- 267
- 843
7159

Write the following questions out in an algorithm and calculate the answers.
a) $5639-3728=$
b) $8925-3927=$
c) $7294-2837=$
d) $2729-1002=$
Fil in the missing numbers:
a) 9016 - $\qquad$ $=8866$
b) $7000-$ $\qquad$ $=5500$
c) 5500 - $\qquad$ $=4510$
d) 905 - $\qquad$ $=455$

Write the following questions out in an algorithm and calculate the answers.
a) $98735-28153=$
b) $82534-37463=$
c) $84632-48373=$
d) $39384-28476=$

Merlin was selling 63,004 dragon spikes a month, and 3,265 dragon teeth. After a year, the sales of dragon spikes decreased by 7,567 . How many spikes does he sell a month now?

Your school bought 15 packets of 80 pencils with a budget of $\$ 480$. How much did each pencil cost if the school went over budget by $\$ 150$ ?
There are 237 people on the train when it leaves Central Station. When it gets to Town Hall, 75 people get off and 102 people get on. How many people are on the train as it departs Town Hall station?

Stephanie had $\$ 150$ to spend at the shops, she spent $\$ 18$ on food, $\$ 60$ on a new pair of shoes, $\$ 12$ on a smoothie and $\$ 40$ on a new school bag. How much money did she have left?

The local tennis club needed new tennis balls. To pay for all the new balls, each person in the club donated $\$ 12.45$. The bill for the new balls came to a total of $\$ 510$. The club had $\$ 50.25$ left over and decided to put it towards their end of year Christmas party. How many people are members at the tennis club?

Fill in the missing numbers:
a) 90163 - $\qquad$ $=86905$
b) $\qquad$ $-8486=66380$
c) 94189 - $\qquad$ $=92330$
d) $\qquad$ $-9298=53678$

Write the following questions out in an algorithm and calculate the answers.
a) $852132-714011=$
b) $416581-132623=$
c) $255921-120614=$
d) $524132-231310=$

Dale's house renovations fell under budget! If he went $18 \%$ under his original budget of $\$ 156000$, how much did he actually spend on his renovations?

Jack is buying a new couch. He has found a couch that he loves at 3 different stores. Its full price is $\$ 1460$, but the first store had it one sale for $15 \%$ off, the second store had it on sale for $1 / 5$ off the original price and the third store has it on sale for 0.21 off the original price. Which store should he buy the couch from and how much will pay?

## Extension

1. Complete the addition and subtraction crossword.
2. Using the guide numbers in each across and down section, fill in the secret code.

> Example: 1 Across is $965+4774=5739$.

The number 5 is in the box with the first number of the code.


CODE:


Code: 5..................

## Challenge/ Additional Task

In the subtraction sum below $a, b$ and $c$ are digits and $a$ is less than $b$. What is the value of $c$ ?

$$
\begin{array}{r}
b a \\
-a b \\
\hline c 6
\end{array}
$$

