## Tuesday Term 4 Week 2



#### Subtraction

#### WALT:

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

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.





ones

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





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.

tens

tens





## How to Use the Algorithm .....

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







tens

tens

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**.

12 –

tens

Now we can solve it!



-2=2

hundreds

hundreds

Put this answer under the line.

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

hundre

ds



# Put this answer under the line.

#### The answer is 273.





#### Solve these problems using the algorithm...

# 1) 746 2) 438 3) 734 -328 -187 -466



#### Answers





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!





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**.





hundreds

3

tens

Q

4 10 15

ones

# Now we can solve the



#### Nothing to Borrow hundreds tens ones Now we can solve the 10 15 2 problem. •• tens tens tens



#### The answer is 238.

tens

ones



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#### Solve these problems using the algorithm...

#### 



#### Solve these problems using the algorithm...



BLUE	RED	GREEN
<ul> <li>Write the following questions out in an algorithm and calculate the answers.</li> <li>a) 5639 - 3728 =</li> <li>b) 8925 - 3927 =</li> <li>c) 7294 - 2837 =</li> <li>d) 2729 - 1002 =</li> </ul>	<ul> <li>Write the following questions out in an algorithm and calculate the answers.</li> <li>a) 98735 - 28153 =</li> <li>b) 82534 - 37463 =</li> <li>c) 84632 - 48373 =</li> <li>d) 39384 - 28476 =</li> </ul>	Fill in the missing numbers: a) 90163 = 86905 b) 8486 = 66380 c) 94189 = 92330 d) 9298 = 53678
Fil in the missing numbers: a) 9016 = 8866 b) 7000 = 5500 c) 5500 = 4510 d) 905 = 455	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?	Write the following questions out in an algorithm and calculate the answers. a) 852132 - 714011 = b) 416581 - 132623 = c) 255921 - 120614 = d)524132 - 231310 =
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?	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?	Dale's house renovations fell under budget! If he went 18% under his original budget of \$156 000, how much did he actually spend on his renovations?
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?	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: 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?

> ba –<u>ab</u> c6