NUMBER & ALGEBRA

YEAR 5-6 ODD YEARS

Task Copy Masters

Task 1

Year Five option

Leah's family have been fundraising to go to a family celebration in Rarotonga. Last weekend they had a fundraising event at the market and raised $2198. They had already raised $867. How much money have they raised altogether?

Leah's family have been fundraising to go to a family celebration in Rarotonga. Last weekend they had a fundraising event at the market. Now they have raised $5432 altogether. Before the weekend they had $3789. How much money did the weekend event raise?

Leah's family have been fundraising to go to a family celebration in Rarotonga. Last weekend they had a fundraising event at the market. Now they have raised $6534 altogether. Before the weekend they had $3785. How much money did the weekend event raise?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 1

Year Six option

A school has been fundraising for new furniture. Last weekend they had a fundraising event and raised $6748. They had already raised $39867. How much money have they raised altogether?

A school has been fundraising for a new sunshade. Last week they had a fundraising event and altogether they now have $48 432. Before the event they had $13 789. How much money did the event raise?

A school has been fundraising for a new classroom block. Last week they had a fundraising event and altogether they now have $235 534. Before the event they had $93 785. How much money did the event raise?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 1 (independent)

Use a place value house and place value blocks and solve the following equations:

5157 + 742 =

4261 + 4728 =

1534 + 2564 =

14 393 + 361 =

554 328 + 12 491 =

What do you notice? Justify your thinking.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 2

Year Five option

Kaitiaki has been collecting Mine-coins.

He has $2225 and after buying content from the Minecraft marketplace, he has $539 left.

How much did he spend?

Kaitiaki is playing a computer game and has gained a score of 9837.

He is attacked and when the attack finishes, he is left with 968 points. How many points did he lose in the attack?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 2

Year Six option

Kaitiaki has been collecting Mine-coins.

He has $22 225 and after buying content from the Minecraft marketplace, he has $5539 left.

How much did he spend?

Kaitiaki is playing a computer game and has gained a score of 543 837.

He is attacked and when the attack finishes, he

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 2 (independent)

Use a place value house and place value blocks and solve the following equations:

$1531 - 1249 =$

$735 - \underline{\hspace{1cm}} = 326$

$\underline{\hspace{1cm}} - 432 = 278$

$4321 - 1795 =$

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 3

Factors and multiples (2 player game)

The aim of this game is to be the last person to cross out a number.

1) The first players can choose a positive even number that is less than 50, and cross it out on the grid.

2) The second player must choose a number to cross out that is a factor or multiple of the first number.

3) Take turns to cross out numbers that are a factor or multiple of the number just crossed out.

Play the game a few times and see if you can find a way to win.

Now play again and challenge yourselves to find the longest chain possible.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 3 (independent)

Play the factors and multiples game with a partner and try and find the longest chain. Remember the rules below:

1)   The first players can choose a positive even number that is less than 50, and cross it out on the grid.

2)   The second player must choose a number to cross out that is a factor or multiple of the first number.

3)   Take turns to cross out numbers that are a factor or multiple of the number just crossed out.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 4

Year Five option

Mamia is helping her family pack t-shirts to sell at the market. 247 t-shirts will fit in each box without wrinkling any. They end up with 6 boxes. How many t-shirts have they got to sell at market?

Mamia is helping her family pack t-shirts to sell at the market. 435 t-shirts will fit in each box without wrinkling any. They end up with 9 boxes. How many t-shirts have they got to sell at market?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 4

Year Six option

Mamia is helping her family pack t-shirts to sell at the market. 89 t-shirts will fit in each box without wrinkling any. They end up with 46 boxes. How many t-shirts have they got to sell at market?

Mamia is helping her family pack t-shirts to sell at the market. 286 t-shirts will fit in each box without wrinkling any. They end up with 15 boxes. How many t-shirts have they got to sell at market?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 4 (independent)

Year 5 option

Solve the following equations:

$346 \times 5 =$

$663 \times 6 =$

$489 \times 8 =$

Represent your solution strategy using equations and an area model.

Year 6 option

Solve the following equations:

$346 \times 54 =$

$663 \times 69 =$

$489 \times 81 =$

Represent your solution strategy using equations and an area model.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 5

Year 5 option

A movie theatre has 24 seats in each row. There are 16 rows.

How many seats are in the movie theatre?

Show your solution using two different representations.

A movie theatre has 29 seats in each row. There are 31 rows.

How many seats are in the movie theatre?

Show your solution using two different representations.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 5

Year 6 option

The shopping mall carpark has 288 parking spots on each floor. The carpark has 32 floors.

How many cars can fit in the carpark?

Show your solution using two different representations.

$3467 \times 495 =$

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 5 (independent)

Solve the following equations:

$24 \times 18 =$

$29 \times 45 =$

$48 \times 32 =$

$55 \times 47 =$

$32 \times 67 =$

$157 \times 62 =$

What patterns did you notice and use to help you solve the equations?

Would the patterns work for any numbers when multiplying?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 6

Year 5 option

John sells t-shirts at the night market. At the end of the month, he banks $395 and that includes the float of change he started with. If he charges $7 per t-shirt, how many t-shirts has he sold and how much float did he start with?

What are three other exact amounts that John could have made including the float?

What rule or pattern could you use to find the amount John would make regardless of how many t-shirts he sold?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 6

Year 6 option

John sells t-shirts at the night market. At the end of the month, he banks $3295 and that includes the float of change he started with. If he charges $7 per t-shirt, how many t-shirts has he sold and how much float did he start with?

What are three other exact amounts that John could have made including the float?

What rule or pattern could you use to find the amount John would make regardless of how many t-shirts he sold?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 6 (independent)

Year 5 option

Solve the following equations:

$646 \div 4 =$

$781 \div 9 =$

$965 \div 3 =$

Year 6 option

Solve the following equations:

$5646 \div 4 =$

$9781 \div 9 =$

$7965 \div 3 =$

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 7

Year 5 option

Our school is going to a park for an athletics day and using minivans for transport. Each minivan can take 8 passengers and there are 793 people to transport.

How many minivans do we need?

What numbers could you use with your solution strategy that would mean you had the same number of people in each minivan?

Task 7

Year 6 option

The high school is going to a park for an athletics day and using minivans for transport. Each minivan can take 8 passengers and there are 4793 people to transport.

How many minivans do we need?

What numbers could you use with your solution strategy that would mean you had the same number of people in each minivan?

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 7 (independent)

Year 5 option

Solve the following equations:

$486 \div 5 =$

$22 \times 14 =$

$952 \div 6 =$

$38 \times 21 =$

$898 \div 4 =$

Year 6 option

Solve the following equations:

$4386 \div 5 =$

$223 \times 24 =$

$7952 \div 6 =$

$381 \times 211 =$

$8982 \div 4 =$

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 8

Solve these equations:

14 + 9 = ___ + 8

___ + 17 = 26 + 15

93 − ___ = 83 − 37

235 − 46 = ___ − 48

375 + 28 − ___ = 377

57 + 4 + 5 = 56 + ___

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 8 (independent)

Solve these equations:

27 + 16 = 29 + __

51 – __ = 61 – 37

__ + 137 = 274 + 139

145 – 69 = __ – 68

363 + 78 – __ = 365

85 + 7 + 2 = 85 + __

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 9

Work together to decide which equations are true or false.

$536 + 618 = 436 + 718$

$8 + 8 + 376 = 376 + 16$

$77 - 49 = 75 - 47$

$9 + 9 + (5 \times 9) = (2 \times 9) + (5 \times 9)$

$16 \times 8 = (16 \times 10) - 16$

$9 + 10 + 11 + 12 = 13 + 14 + 15$

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 9 (independent)

Explain and justify which number sentences are true and false:

55 = 49 + 5 + 2

29 + 34 = 27 + 32

314 − 148 = 214 − 48

32 − 15 = 34 − 13

42 − 13 = 29 − 9

15 + 6 + 77 = 4 + 17 + 67

Write your own true and false number sentences.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 10

Lotu solves 98 × 56 = 5488

Her teacher then asks her to solve the following equations:

56 × 98 =

5488 ÷ 56 =

5488 ÷ 98 =

Lotu looks at the equations and says that she already knows the answers without solving each of them.

What patterns do you think that Lotu noticed?

Do these patterns always work?

Does these patterns work with different operations?

Write your own sets of equations that use the same patterns.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 10 (independent)

John said "When you are multiplying two numbers together it doesn't matter which order you multiply them in, the product will be the same".

Do you agree or disagree with John's conjecture.

Does this work for all numbers?

Does it work for addition, subtraction, and division?

Use the material to build a model to prove John's conjecture.

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 11

Ticket prices for bus travel are presented in the table.

Ticket options	Adult	Concession	Description
Single (paper ticket)	$3	$1.20	Unlimited bus travel for 3 hours from first use.
Daily (paper ticket)	$7	$1.70	Unlimited bus travel until the last bus of the day.
Flexi trip (Tap and ride)	$20	$7.50	10 single 3-hour trips are pre-loaded to the car.
Weekly (Tap and Ride)	$20	$7.50	Unlimited bus travel for 7 days from first use.

Isaiah will be catching the bus to Intermediate School next year. He will need to buy paper bus tickets or a 'Tap and Ride' card. As a student, he can get a concession far.

If Isaiah catches the bus to and from school every day, what is the best option? Explain your thinking.

Task 11 (independent)

You have $25 to buy lunch from the school canteen for yourself and your friend. What are some different ways to order lunch (food and drink) from the school canteen? How much change would you have?

FOOD	
Sandwiches	$5.50
Pizza slice	$6
Mac'n'cheese	$3.70
Pie	$6.50
Sushi	$8.90
Cookie	$2.80
Slice	$3
Museli bar	$2.50
Chips	$2
DRINKS	
Fruit juice	$3.50
Milk	$2
Smoothie	$7.50

Phase 2: Year 5-6: Number and Algebra (odd years)

Task 12

Sam is ordering fish and chips for a family get-together. There will be 6 people – Sam, his wife, his 2 children, and his parents.

Sam's family usually order 2 hoki, 2 potato fritters, small chips, and 2 kids' packs.

Sam's parents share their order of 2 hoki, 2 potato fritters, and small chips.

a. Give two options how Sam might place the order? Explain which option offers the best value for money.
b. Should Sam suggest sharing the total cost of the bill? If so, how might the bill be shared?

FISH	
Hoki	$5.00
Terahiki	$6.00
Snapper	$7.00
SNACKS	
Chicken nuggets	$0.80 each
Dim sims	$1.00 each
Potato fritters	$0.80 each
Chips	$3.00 small
	$5.00 medium
	$7.50 large

FAMILY DEAL 1	
4 hoki 4 potato fritters Large chips	$22.50
FAMILY DEAL 2	
6 hoki 6 potato fritters Large chips	$30.00
KIDS' PACKs	
chicken nuggets and small chips	$6.00