

Thursday 29th August

Maths family night





Number Hunt

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109

Using the digits **3** and **5** every time and only once

Create number sentences that cross out as many answers on the grid as you can

Use number properties and be creative with maths

Tamariki in Early Years can "bend the rules"

11 =	38 =	50 =
45 =	14 =	5 =

5 =

32 =

43 =





We are all here to help









Fluency with Reasoning leads to retention







Year 7 and 8s

Year 11s

Year 1 and 2s





Insights from other schools







A Senior Maths Teacher shares how she uses it with Year 12 + 13





What maths is needed for our children's success?





Accuracy Estimation Appropriateness Automaticity

Representing (unfamiliar) Connecting (life, subjects)

positive influence relevance



Investigating Creating Planning Setting Out

Problem

Solv



Explaining Justifying Proving Generalising

self direction self agency





Formulate

Solve

Evaluate

Communicate

What maths is needed? How do I make a plan?

Select and use procedures/facts Setting out accurately and

Is my solution reasonable? Are my strategies appropriate?

Clear and concise language Logical conclusions



New challenge is to value and promote estimation







discussNdefend - estimation

What is the length of the string in whole centimetres?



www.stevewyborney.com

The perimeter of a sandpit is 24m. Draw a diagram of what the sandpit might look like, include the measurements for the length of each sides.



Learner First[™]

Enabling

- Make the number smaller, e.g. 12m
- The sandpit has to be a rectangle

Extending

2

3

4

5

6

8

- Increase perimeter
- The sandpit could be any shaped polygon
- Find the area of the sandpits





Maths Family Night

Add 'em Ups



Add 'em Ups





Games to develop essential skills

13	9	12	12	12 12
5	3	6	14	9
4	2	5	11	42
4	4	1	9	





Maths Family Night



Gnarly Numbers/Target Boxes





RecallNReason : Number Boxes Game



Number Boxes

Years 1 to 8

Materials: 6 sided dice, pen and paper



Maths concepts: computation, place value

<u>Aim:</u> Be the closest to the target number

- . Choose which number box layout you want to play and decide on a specific target number to aim for, e.g. 82
- 2. Players take turns to roll a dice and place it somewhere in one of their boxes.
- 3. Once the number has been placed, it cannot be moved. One number on any given round may be "thrown away" and written in the throw away box instead.
- 4. Play continues until all of the boxes are full. Players justify which number is closest to the target number.

Explore :

With the numbers you rolled – could you have rearranged them differently to get closer to the target number?





RecallNReason : Number Boxes game





recallNreason





Number Boxes

Years 1 to 8

Materials: 6 sided dice, pen and paper



Maths concepts: computation, place value

<u>Aim:</u> Be the closest to the target number

- 1. Choose which number box layout you want to play and decide on a specific target number to aim for, e.g. 200
- 2. Players take turns to roll a dice and place it somewhere in one of their boxes.
- Once the number has been placed, it cannot be moved.
 One number on any given round may be "thrown away" and written in the throw away box instead.
- 4. Play continues until all of the boxes are full. Players justify which number is closest to the target number.

 $(50 \times 4) + (2 \times 4) = 208$ $(30 \times 6) + (1 \times 6) = 186$







Read Write Order Expand Rearrange & regroup

Place value – big idea



Helping students deepen place value understandings



Read it	Thirty six	Three hundred and sixty eight
Expand it	3 tens and 6 ones	3 hundreds, 6 tens and 8 ones
Group it	36 ones	36 tens and 8 ones, 3 hundreds and 68 ones
Rearrange it	2 tens and 16 ones 1 ten and 26 ones	35 tens and 18 ones





moveNprove activate the processes for v9 Maths











Knowing Numbers – early years





Helping our young learners



8 is 1 more than 7

8 is 2 less than 10







Explore connections and representations





How many more can you create if you remove a part eg

8 = [] + 3, 5 = [] - 3





Explore connections and representations





How many more can you create if you remove a part eg

 $15 = [] \times 3, \qquad 5 = [] \div 3$





Choose one number equation and turn it into a **Story** eg

There were 5 muffins on each of the three plates. There are 15 muffins altogether.

Choose one number equation and turn it into a **problem** eg

5 x [] = 15 [] x 3 = 15

I put 5 pokeman cards into each bag. If I have 15 pokeman cards altogether, how many bags do I have? <u>*How many did I start with?*</u>





Sue had 67 Countdown Disney cards in her collection. A week later she had a total of 152 Disney cards. How many more Disney cards did [] get that week?







Year 5 and 6 tamariki results



Help students by asking what the problem is about before they race off to try and solve it - this is formulating





50 + 30 and 8 + 3	40 – 20 and 3 – 9 ‼	Place Value Splitting – both numbers
58 + 30 + 3	43 – 20 - 9	Place Value Jumping – one number
60 + 33 - 2	43 – 30 + 1	Compensation - round and adjust
60 + 31	44 – 30	Compensation – conceptual
5 8 <u>+ 3 3</u>	4 3 <u>- 2 9</u>	Algorithm (traditional)
		🔁 Learner First



Addition	Subtraction	

Jot down what you would do automatically Place Value Compensate Algorithm



43 subtract 29

in controlled conditions to show how existing programs and materials are impacting learning – May 2024









Think like a mathematician

Estimate



- Look for patterns
- Change your thinking
- Use diagrams, equipment and record your ideas.

Act like a mathematician

- Take a risk
- Check your work
- Make mistakes
- Keep trying



Talk like a mathematician

- Ask questions
- Use maths language



- Explain your thinking
- Justify your thinking

Be a mathematician





Two Truths and a Lie



- a) The circle has more white than orange
- b) One half of the circle is orange
- c) The circle is split into 4 parts

You can find more maths examples on <u>MashUpMaths</u> Read <u>4 ways to use 2 truths and a lie</u>





Which One Doesn't belong?

https://wodb.ca/

Complete the Set









We are all here to help

Formulate



Solve

Evaluate









11 = 3 + 3 + 5 38 = 33 + 5 50 = 53	- 3
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<mark>45</mark> = 3 x 3 x 5	14 = 5 + 3 x 3	5 = 3 x 5 ÷ 3

32 = 3 ³ + 5	5 = $\frac{3}{3} \times 5$	43 = 5! ÷ 3 + 3
	3	

