Level 4 Maths Games & Practical Activities

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Addition and Subtraction

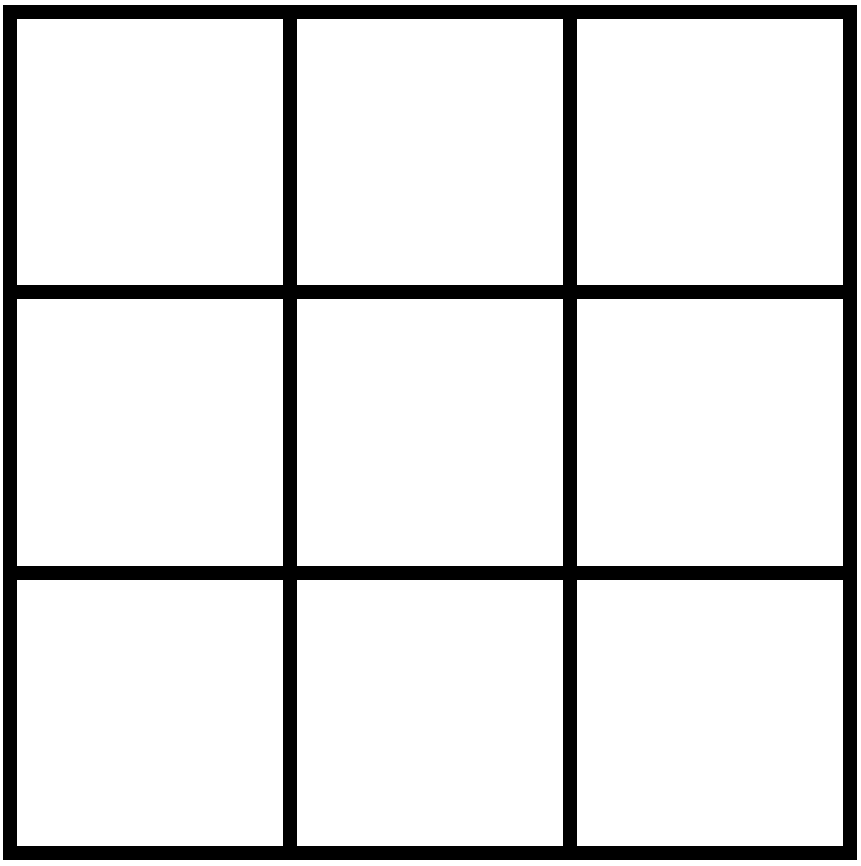
Resources needed: number cards 0 – 20; Addition Chart; counters; yoghurt or margarine container; Bingo boards 3 x 3; bead string to 50, set out in groups of 10

Addition Chart

+	2	3	4	5
2				
3				
4				
5				

+	2	3	4	5
2				
3				
4				
5				

Bingo Board 3 x 3



What will the students learn?

- Number facts to 10 (revision)
- Number facts 10 to 15
- Number facts 15 to 20
- Doubling and halving

Activity 1: Number Facts to 10

Resources: number cards 5 to 10

Select a number card between 5 to 10 and shows it to the student. The student suggests two numbers to add together to make this number.
e.g. Number facts about 10:

0 and 10
1 and 9
2 and 8 etc.

Number facts about 6:

4 and 2
5 and 1
3 and 3 etc.

Activity 2: The Addition Chart

Resource: Addition chart, Page 1

Use the addition chart for quick addition of numbers to 10. The student should be able to do this now without counters.

Activity 3: Number Facts 10 to 15

Resources: number cards 10 to 15

Select a number card between 10 to 15 and shows it to the student. The student suggests two numbers to add together to make this number. (Refer to Activity 1)

Activity 4: Number Facts 15 to 20

Resources: number cards 15 to 20

Select a number card between 15 to 20 and show it to the student. The student suggests two numbers to add together to make this number. (Refer to Activity 1)

Activity 5: Doubling

Resources needed: counters, number cards from 1 to 10, yoghurt or margarine container

Select a number card from the lucky dip bucket and ask the student to make the double of that number with counters.

Activity 6: Halving

Resources needed: counters, number cards – even numbers from 2 to 20, container

Select a number card from the lucky dip bucket and ask the student to halve this number using counters.

Activity 7: Doubles Bingo

Resources: Bingo boards 3 x 3; even number cards from 2 to 20 (3 sets); 1 set of number cards 1 to 10 as the caller's set.

Players randomly cover their boards with 9 **even** number cards between 2 and 20. The caller calls a number between 1 and 10. If a player has the double of the called number on their Bingo board, they put a counter on top of the number. The first to have 3 in a row covered calls "Bingo".

Activity 10: Halves Bingo

Resources: Bingo boards 3 x 3; 3 sets of number cards from 1 to 10. One set of even numbers 2 to 20 as the caller's set.

This is played the same ways as Doubles Bingo, except the students fill their boards with number cards 1 to 10. They put a counter on the number if it is half of the number that is called.

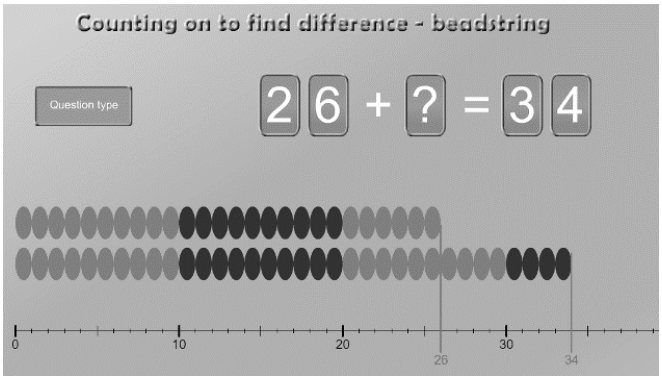
Activity 11: Finding the missing number

Resource: bead string to 50, set out in groups of 10, (or use rows of counters of different colours)

Students can use the bead string to find the missing number, 26 + ? = 34

More examples:

15 + ? = 21; 19 + ? = 27



Multiplication and Division

Resources needed: pencils, paper, times tables chart

Multiplication Chart: Basic Chart

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

What will the students learn?

- Solving word problems
- Showing visual representations of multiplication and division problems
- Using the multiplication and division signs, X and ÷
- Making equations
- Times tables x2, x 10, x5, x3, x4

Activity 1: How many eggs?

Resources: Pencils and paper

Say to the students 'There are 6 eggs in a carton. How many different ways can you set out the eggs?'

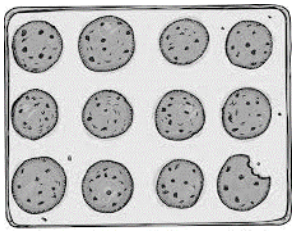
They draw the eggs in the cartons in different ways.

They make equations to show this, e.g.
6 x 1 = 6
3 x 2 = 6
2 x 3 = 6

Activity 2: Setting out cookies

Resources: Pencil and paper

Tell the students they are making 12 cookies. Ask them to draw different cookie trays with rows of cookies designed in different ways. There have to be equal numbers in each row, e.g. 2 rows of 6. Then write it as an equation, e.g.
2X6=12
6X2=12
3X4=12
4X3=12
1X12=12



Activity 3: Making equations

Resource needed: counters

Give the students 20 counters and ask them to put them into groups, with an equal number in each. They make equations from what they have made,
e.g. 5 X 4=20; 4 X 5=20; 2 X 10=20; 10 X 2=20
They can do the same with other numbers of counters, e.g. 8, 15, 18, 24

Activity 4: Sharing Sweets

Resources: pencils, paper and counters

A bag of 18 sweets was shared between children at a party. Each child got 3 sweets. How many children were at the party?
Each student chooses the number of children at the party and works out their answer.

This can be made into a division sum: 18 ÷ 3 = 6

Activity 5: Sharing Pencils

Resources: pencils, paper and counters

I have 18 pencils and I want to share them evenly, so that each student has the same number of pencils. How many students can I share them evenly with?"
Work out answer without using counters, pencils and paper, e.g.
18 pencils shared between 9 students = 2 pencils each
Make this into a division sum: 18 ÷ 9 = 2
18 pencils shared between 6 students = 3 pencils each.
Division sum: 18 ÷ 6 = 3
18 pencils shared between 3 students = 6 pencils each.
Division sum: 18 ÷ 3 = 6

Activity 6: How many groups?

Resource needed: counters

Ask students to make division sums from counters, e.g.
20, how many groups of 5? (4 groups)
Write this as 20 ÷ 5 = 4
Give them other examples, using different numbers of counters, e.g.
16, how many groups of 4?
8, how many groups of 2?
9, how many groups of 3?

Activity 7: Times tables practice

Times tables x2, x3, x4, x5, x10

Students need to have memorised the times-tables before starting these activities. They can mark their own work and keep as record of their improvement as follows:

Example of the student record:

Name: Rani

Date	Activity 1	Activity 2	Activity 3
4 . 9 . 18	75 sec, 7 correct		
11 . 9 . 18	68 sec, 9 correct		
18 . 9 . 18	52 sec, 10 correct		

Name: Rani

Date	Activity 4	Activity 5	Activity 6
24 . 9 . 18	75 sec, 7 correct		
1 . 10 . 18	68 sec, 9 correct		
8 . 10 . 18	52 sec, 10 correct		

How Quick Can I Be?

Resources: pencils, paper and set of problems, watch or timer
Ask students to write down the answers as quickly as possible. Note the time. Next session: ask the same questions, note the time again. Are they improving? Refer to chart on previous page.

Example 1:

1. 3 x 4 =
2. 7 x 3 =
3. 7 x 10 =
4. 9 x 5 =
5. 7 x 2 =
6. 10 x 10 =
7. 1 x 3 =
8. 0 x 1 =
9. 2 x 4 =
10. 4 x 5 =

Example 2:

1. 12 ÷ 2 =
2. 28 ÷ 4 =
3. 20 ÷ 5 =
4. 30 ÷ 10 =
5. 15 ÷ 3 =
6. 80 ÷ 10 =
7. 30 ÷ 6 =
8. 12 ÷ 1 =
9. 16 ÷ 4 =
10. 25 ÷ 5 =

Example 3:

1. 3 x □ = 12
2. 7 x □ = 14
3. 7 x □ = 21
4. 9 x □ = 27
5. 7 x □ = 35
6. 10 x □ = 100
7. 1 x □ = 4
8. 0 x □ = 0
9. 4 x □ = 16
10. 4 x □ = 20

Activity 8: Times tables practice: How quick can I be?

Times tables x11, x6, x7, x8, x9, x12

Resources: pencils, paper and set of problems, watch or timer
Ask students to write down the answers as quickly as possible. They note the time they start and finish, and mark their answers. They can keep their own record as follows. Next session: give them the same problems, note the time again. Are they improving? (See example of record chart in Term 2)

Students need to have memorised the times-tables before starting these activities.

Example 1:

1. 3 x 6 =
2. 7 x 3 =
3. 12 x 5 =
4. 7 x 5=
5. 11 x 10 =
6. 9 x 3 =
7. 8 x 1 =
8. 10 x 4 =
9. 8 x 5 =
10. 9 x 10 =

Example 2:

1. 12 ÷ 6 =
2. 28 ÷ 7 =
3. 20 ÷ 10 =
4. 64 ÷ 8 =
5. 81 ÷ 9 =
6. 80 ÷ 10 =
7. 60 ÷ 12 =
8. 99 ÷ 11 =
9. 49 ÷ 7=
10. 45 ÷ 9 =

Example 3:

1. 6 x □ = 36
2. 7 x □ = 49
3. 11 x □ = 55
4. 9 x □ = 72
5. 7 x □ = 56
6. 10 x □ = 10
7. 11 x □ = 110
8. 12 x □ = 84
9. 8 x □ = 40
10. 6 x □ = 24

Addition and Subtraction

What will the students learn?

- Working out problems in their head, (without equipment)
- Creating their own addition and subtraction equations

Activity 1: Up to Twenty

Resources: number card (10 to 20)

Show the students a number card from 10 to 20. Ask: “How many more to add to get up to 20?”

Activity 2: Down to Ten

Resources: number card 10 to 20

Show the students a number card from 10 to 20. Ask, “How many would I have to take away to leave ten?”

Activity 3: Animals in the Paddock

Resources: Drawing materials or counters.

A farmer has horses, cows and sheep in a paddock (field). Altogether there are 15 animals in the paddock. Ask:
How many horses could there be?
How many cows could there be?
How many sheep could there be?

The students can draw or use objects to show the combinations of animals. Then they can write an equation, e.g. 3 horses, 4 cows, 8 sheep would be shown as:
3 + 4 + 8 = 15
Ask them to now choose different numbers of horses, cows and sheep to make 15. They write other equations to show the different possibilities.

Activity 4: Creating equations

Resource needed: counters

Give each student 20 counters. Ask them to use all 20 counters to make different 'plus' sums, e.g. 8 + 9 + 3 = 20. What else equals 20?

Give them practice making their own addition equations with different numbers of counters.

Activity 5: Fruit in a bowl

Resource: Drawing materials or counters

A mother put out a bowl of fruit. There were 5 oranges, 7 bananas and 5 apples. On Monday, 2 oranges were eaten. On Tuesday, 5 bananas were eaten. On Wednesday 3 apples were eaten. How many pieces of fruit were left?

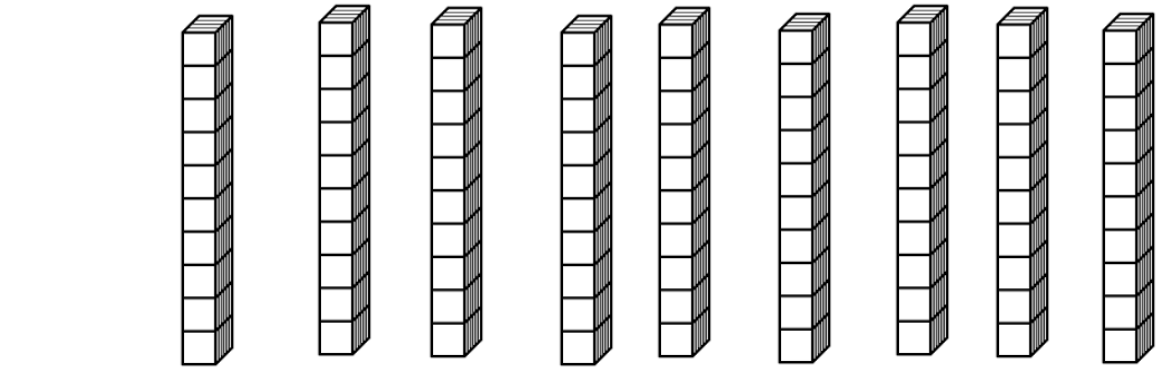
Students can draw the fruit bowl and work out the take-away sum. They can call the 'take-away' sign 'minus'.
17 – 2 – 5 – 3 = 7

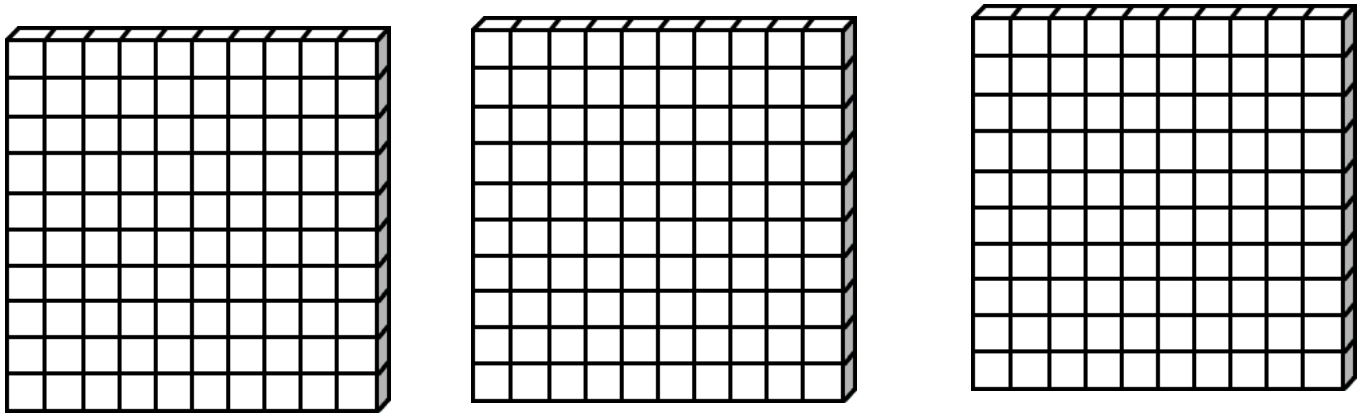
Ask them to make up other ways in which the fruit could have been eaten and make more take-away sums. They can use counters.

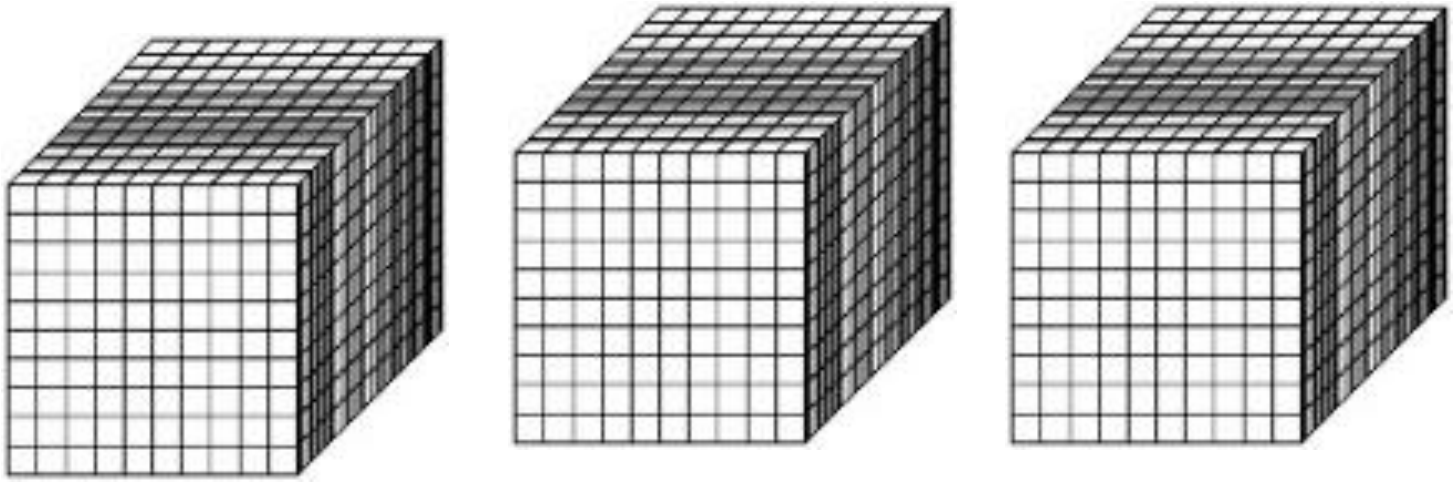
Place Value

Resources needed: Block Pictures; Place Value chart; selection of random number cards between 1000 and 9,999

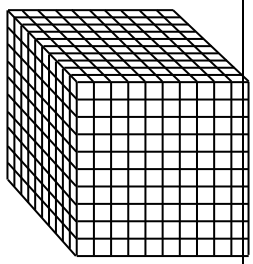
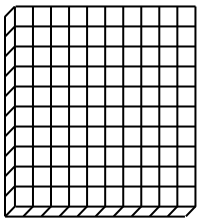
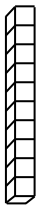
Block Pictures: Make 9 of each.
Use beans for the ones.







Place Value Chart (to thousands)

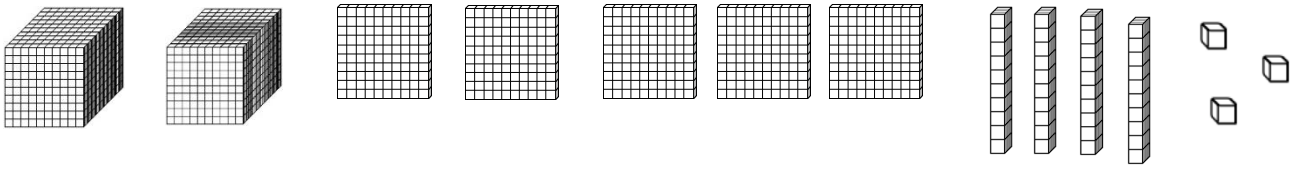
			

What will the students learn?
Reading, writing, expanding and ordering 4-digit numbers

Activity 1: Making 4-digit numbers with blocks-pictures

Resource needed: Cut-out blocks-pictures

Use the pictures of the thousands, hundreds, tens and ones (blocks), to make, write and order numbers as directed, e.g. Make 2543



Activity 2: Writing 4-digit numbers

Resource needed: Cut-out blocks-pictures

Use the blocks-pictures to make a number.
The students have to write the number that you have made.

Activity 3: Expanding 4-digit numbers

Resource needed: Place value chart, a selection of numbers between 1000 and 9,999 (make them on small pieces of paper).

The students select a number and expand the number by writing in the Place value chart, e.g. for 3472

Thousands	Hundreds	Tens	Ones
3	4	7	2

Activity 4: Ordering 4-digit numbers

Resources needed: a selection numbers from 1000 to 5000 (on small pieces of paper)

Give the student 3 numbers. Ask the student to order them smallest to largest. Then largest to smallest. Repeat with other 4-digit numbers.
Extend to 9,999.

Activity 5: In the Middle (for 3 players)

Resources: number cards 1000 to 9000, yoghurt or margarine container

Prepare about 20 cards, and puts them in a lucky dip bucket. Each player selects a card. The players now must work together to put the three number cards in order from smallest to largest. The player who puts in the middle number is the winner for this round and gets a point. Repeat several times.

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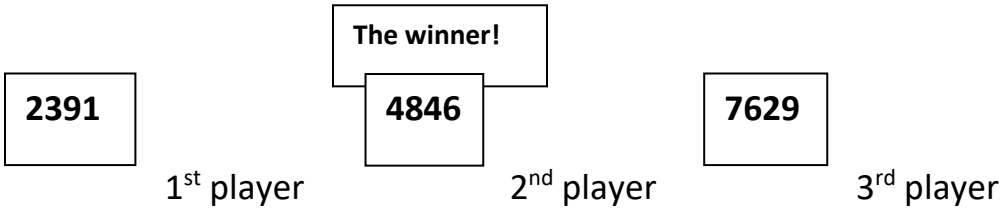

Play the game again, but this time the players must order the number from largest to smallest.