

Numbers Week – Calculation Y3/4

Day 1

- This week you need to cut a piece of paper into nine pieces and number them 1 to 9.
- Shuffle the number cards and deal yourself three.
- How many **even** numbers can you make using some or all of your three cards by either adding, subtracting, multiplying or dividing? For example, with the numbers 6, 7 and 2 here are some of the even numbers you can make:



Numbers Used	Even numbers
6, 7, 2	$6 + 2 = 8$
	$6 \times 2 = 12$
	$6 - 2 = 4$
	$7 \times 2 = 14$
	$7 \times 6 = 42$
	$72 + 6 = 78$
	$72 \div 6 = 12$
	$72 - 6 = 66$
	$72 \times 6 = 432$
	$76 - 7 = 74$

- Record **all** the calculations that make even numbers
- Now shuffle the cards and deal yourself three again. How many **even** numbers can you make this time? Record the calculations that make even numbers.
- Now choose three number cards which you think will produce the most **even** numbers. Record the calculations.
- What do you notice?

Notes for adults working with groups of children

- Help the children to work systematically so that they know they have found all possibilities. For example, they could start with each pair of single numbers (such as 6 and 2, then 7 and 2, then 7 and 6) and consider if different ways they can combine these will result in even numbers, then make a two-digit number to combine with a single digit number etc.
- Ask the children to explain their choice of three numbers.

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Day 2

- Shuffle the number cards and deal yourself three.
- How many **odd** numbers can you make using some or all of your three cards by either adding, subtracting, multiplying or dividing?
For example, with the numbers 6, 3 and 9 here are some of the odd numbers you can make:
 - $3 + 6 = 9$
 - $9 + 6 = 15$
 - $93 - 6 = 87$
 - $3 \times 9 = 27$
 - $63 \div 9 = 7$ etc.
- Record **all** the calculations that make odd numbers.
- Now shuffle the cards and deal yourself three again. How many **odd** numbers can you make this time? Record the calculations that make odd numbers.
- Now choose three number cards which you think will produce the most **odd** numbers. Record the calculations.
- What do you notice?

Notes for adults working with groups of children

- Help the children to work systematically so that they know they have found all possibilities. For example, they could start with each pair of single numbers (such as 6 and 3, then 9 and 6, then 9 and 3) and consider if different ways they can combine these will result in odd numbers then make a two-digit number to combine with a single digit number etc.
- Ask the children to explain their choice of three numbers.

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Day 3

- Shuffle the number cards and deal yourself three.
- How many numbers **between 10 and 20** can you make using some or all of your three cards by either adding, subtracting, multiplying or dividing?

For example, with the numbers 6, 2 and 5 here are **some** of the numbers between 10 and 20 you can make:

- $6 + 2 + 5 = 13$
- $5 \times 2 + 6 = 16$
- $25 - 6 = 19$
- ...
- Record **all** the calculations that make numbers between 10 and 20.
- Now shuffle the cards and deal yourself three again. How many numbers **between 10 and 20** can you make this time? Record the calculations that make these numbers.
- Now choose three number cards which you think will be best for making the numbers **between 10 and 20**. Record the calculations.
- What do you notice?

Notes for adults working with groups of children

- Help the children to work systematically so that they know they have found all possibilities.
- Ask the children to explain their choice of three numbers.

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Day 4

- Shuffle the number cards and deal yourself three.
- How many numbers **between 20 and 30** can you make using some or all of your three cards by either adding, subtracting, multiplying or dividing?

For example, with the numbers 6, 2 and 5 here are **some** of the numbers between 20 and 30 you can make:

- $26 - 5 = 21$
- $5 \times 6 - 2 = 28$
- $(5 + 6) \times 2 = 22$
- ...
- Record **all** the calculations that make numbers between 20 and 30.
- Now shuffle the cards and deal yourself three again. How many numbers **between 20 and 30** can you make this time? Record the calculations that make these numbers.
- Now choose three number cards which you think will be best for making the numbers **between 20 and 30**. Record the calculations.
- What do you notice?

Notes for adults working with groups of children

- Help the children to work systematically so that they know they have found all possibilities.
- Ask the children to explain their choice of three numbers.

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Numbers Week – Calculation Y3/4

Day 5

- Shuffle the number cards and deal yourself three.
- How many numbers that are **multiples of five** can you make using some or all of your three cards by either adding, subtracting, multiplying or dividing?

Hint: Think about counting in fives (5, 10, 15, 20, 25 ...).

For example, with the numbers 5, 7 and 2 here are **some** of the multiples of five you can make:

- $7 - 2 = 5$
- $5 \times 2 = 10$
- $7 \times 5 = 35$
- ...
- Record **all** the calculations that make multiples of five.
- Now shuffle the cards and deal yourself three again. How many **multiples of five** can you make this time? Record the calculations that make these numbers.
- Now choose three number cards which you think will make the most **multiples of five**. Record the calculations.
- What do you notice?

Notes for adults working with groups of children

- Help the children to work systematically so that they know they have found all possibilities.
- Ask the children to explain their choice of three numbers.

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