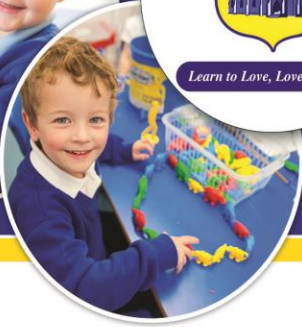


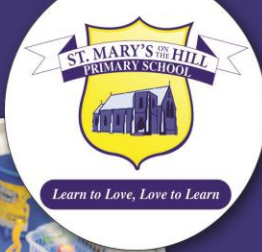
ST. MARY'S ON THE HILL PRIMARY SCHOOL



P2, P3 & P4 Workshop for Parents

Mental Maths
15th October 2025

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Aims of the workshop

- To gain an insight into what we mean by Mental Maths.
- To provide an overview of the mental maths strategies taught in our school.

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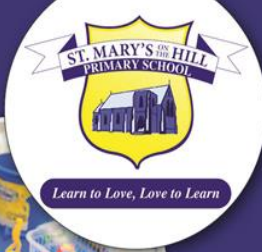


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Before we start ...

- <https://www.youtube.com/watch?v=3icoSeGqQtY>
- This clip is from a talk by Jo Boaler. She is one of the leading figures in maths education.
- This will help you see the importance of making mistakes.

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Why do Mental Maths?

- Equip children for their maths work.
- Essential part of managing everyday events
e.g. planning what to watch on TV, cooking, shopping.
- Ability to calculate in your head.
- Rapid recall of number facts.
- Use a range of different strategies.
- Solve calculations, with the most efficient strategy, quickly and accurately.

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Number Sense

- Number sense is children's **"fluidity and flexibility with numbers"** (Gersten & Chard, 2001).
- A sense of what numbers mean, understanding their relationship to one another, able to perform mental maths, understanding symbolic representations and can use those numbers in real world situations.
- Ability to play with numbers.

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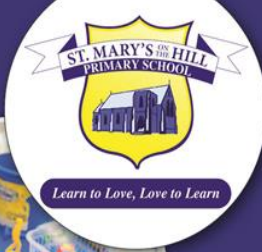
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P2, P3 and P4 children should...

- Learn that there are many ways of getting an answer.
- Have opportunities to explore and share different strategies.
- Realise some strategies are more efficient than others.
- Share thinking to consolidate understanding.
- Reflect on and explain calculations.

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Teaching Mental Maths

- Short 10 min sessions at the start of each maths lesson.
- 4 grid approach.
- Develop the use of mathematical language.
- Gives pace to the lesson.
- Encourages fun.

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30/09/25

One More		One Less
	21	

Counting on, counting back.

13	14	___	16	___	18	___	20
----	----	-----	----	-----	----	-----	----

Counting on, counting back.

4	5	___	7	___	___	10	11
---	---	-----	---	-----	-----	----	----

Counting on, counting back.

One More		One Less
	14	

Counting on, counting back.

11/10/25

One More		One Less
	49	

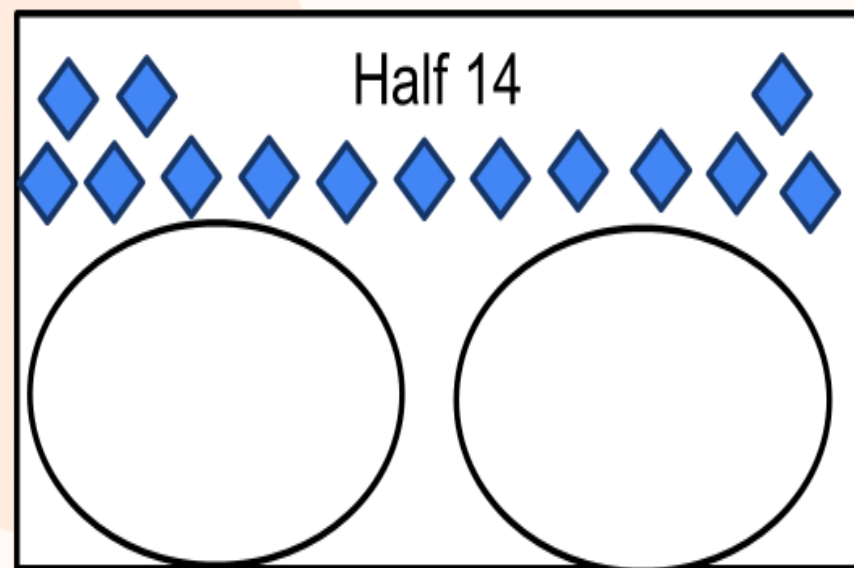
Counting on, counting back.

29	
Tens	Ones

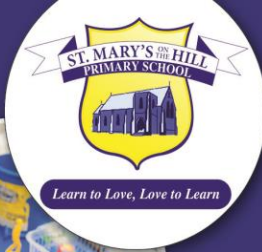
Partitioning.

10	3	16	7	9
—	—	—	—	—
Largest				Smallest

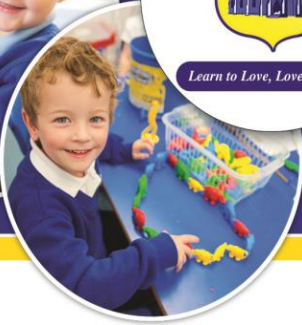
Reordering.



Counting on, counting back.



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Importance of Resilience

<https://www.youtube.com/watch?v=sKpBJjsZ7EE>

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Let's have a go!

- Counting on counting back
- Reordering
- Rounding and adjusting
- Partitioning
- Inverse operation

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Counting on counting back

Counting On Counting Back

When adding and subtracting
count in ones, twos, tens,
hundreds, halves, tenths.



Counting on Counting back

Give the next two numbers
in each sequence.

2

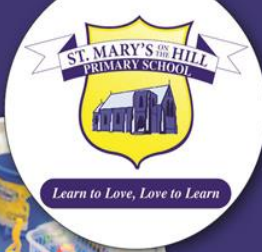
4

6

8

10

12



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P2 Counting on and back

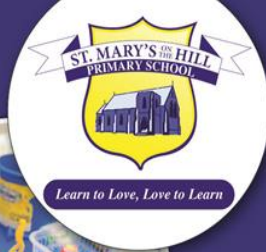
Showing 20 on a number line

We can use a number line to help us with counting as well.

Here are the numbers 1 to 20 shown on a number line.



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P3 Counting on and back

Numbers Before, Between and After

Write the missing numbers:

Hint: not all patterns move by 1s and not all of them start at 1!

	6		8	9	10		12	13	14		16		18	19		
4			7	8		10	11	12		14		16		18		20
20		18		16		14		12	11	10			7			
25		23				20	19		17		15	14	13	12		

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P4 5 Steps to 50 Game

<https://nrich.maths.org/10586>

To play you need to use:

- the dice.
- the 100 square sheet.
- A pencil.

Play the game with a partner.

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Re-ordering

Re-ordering

Re-arrange numbers to make
the calculation easier.

$$6 + 7 + 4$$

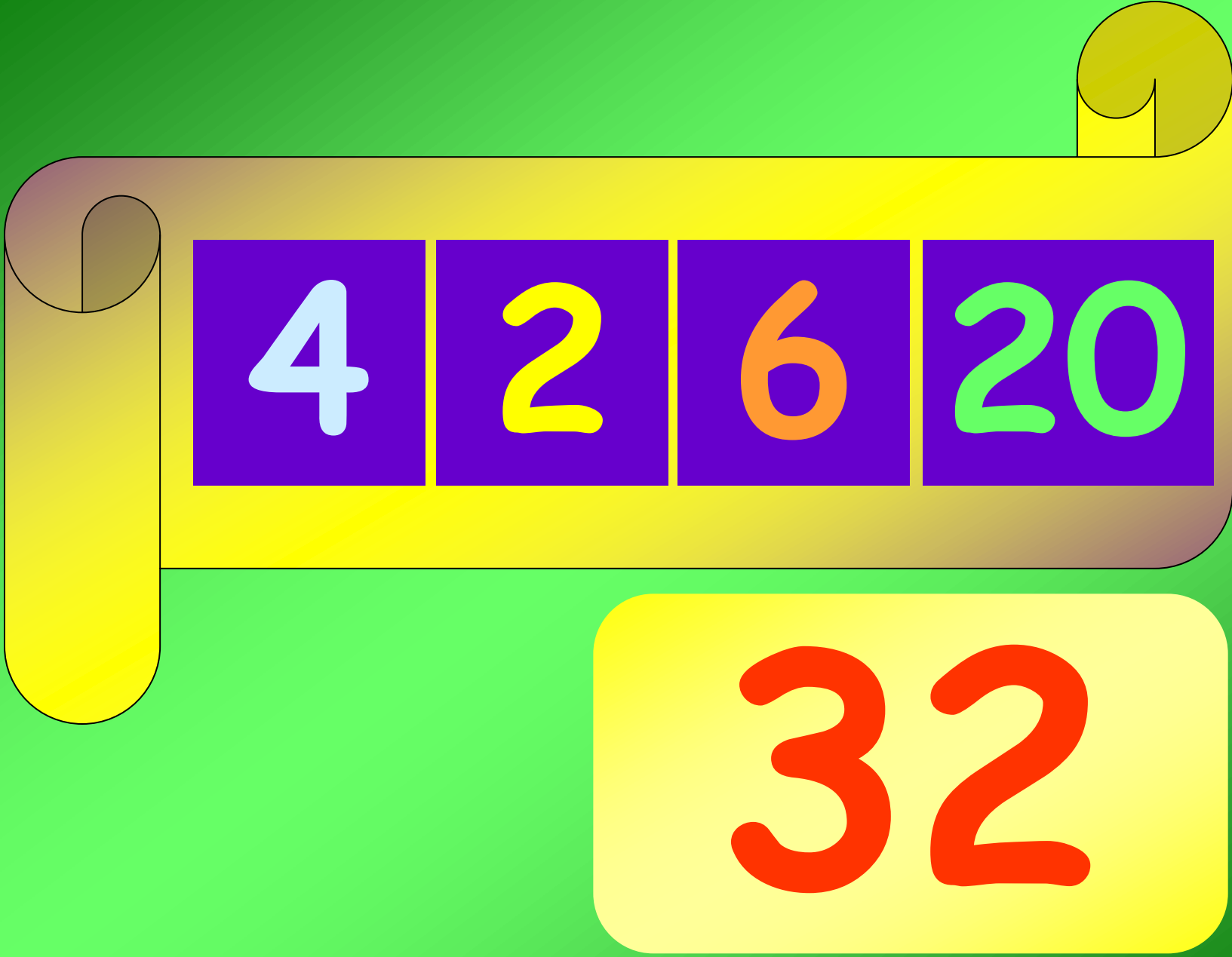
$$6 + 4 + 7$$

$$10 + 7$$

Re - Ordering

Give the total of each
strip of numbers.

Reorder the numbers to make solving the
calculation easier



4

2

6

20

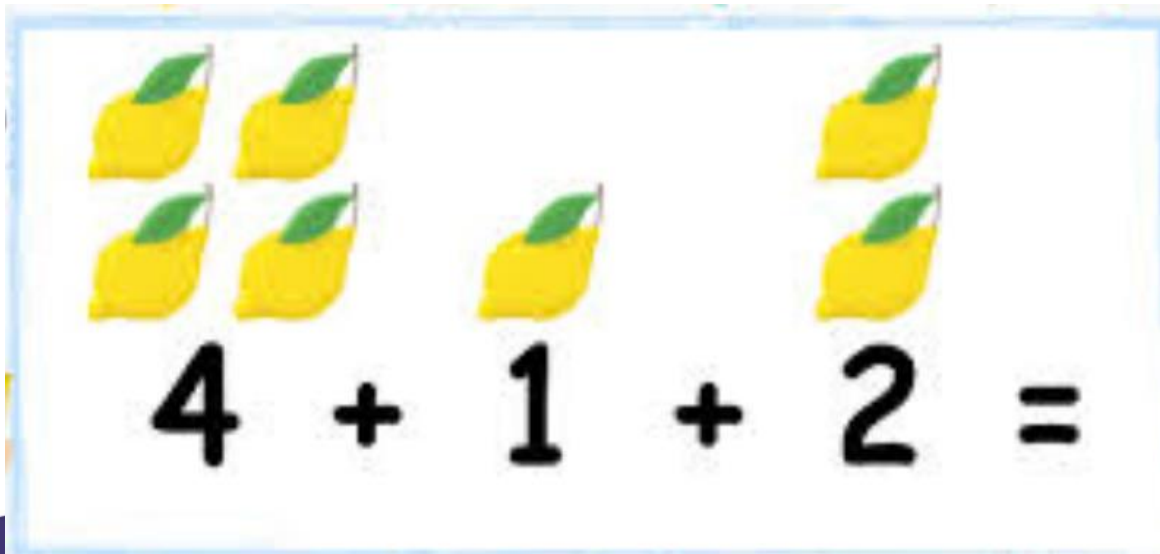
32



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P2 Reordering

- Adding three single digit numbers:



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P3 Reordering

7	8	3	
3	2	9	
5	8	9	

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P4 Reordering

$$25 + 4 + 66 = \underline{\hspace{2cm}}$$

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Rounding and adjusting

Rounding and Adjusting

Alter a number to make a
calculation easier to do.

Near doubles - use doubles and adjust.

Round to the nearest 10/100.

Multiplying using facts you know.



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Rounding and Adjusting

The rounding rap:

1, 2, 3, 4 round down to the 10 before.

5, 6, 7, 8, 9 up to the next 10 on the line.

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Rounding and Adjusting

$$93 - 69 =$$

1. What multiple of 10 is nearest to 69?
2. What is $93 - 70$?
3. Have we subtracted more or less than 69?
4. How should we adjust the answer to make it correct?

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P2 Rounding and Adjusting

Sweet Shop Estimation

Guess the amount of sweets in the jar. Then count the sweets and write down the answer.



Estimate _____

Answer _____



Estimate _____

Answer _____



Estimate _____

Answer _____



Estimate _____

Answer _____



Estimate _____

Answer _____



Estimate _____

Answer _____

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P3 Rounding and adjusting Subtracting 9

Can you subtract 9 from the numbers in the grid below? Try by first subtracting 10 and then adding 1. Once you've worked out the answer, write out the full calculation. The first one is done for you.

Starting Number	-10	+1	Calculation
15	5	6	$15-9=6$
27	_____	_____	_____

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P4 Rounding and adjusting

$$197 + 125 = \text{-----}$$

$$\begin{aligned} 197 + 125 &= \text{-----} \\ 200 + 125 &= 325 \\ 325 - 3 &= 322 \end{aligned}$$

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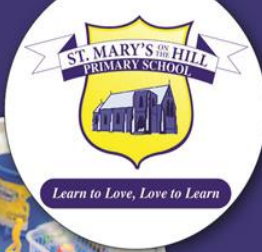
Partitioning

Partitioning

When calculating keep one number whole and break up the other. Or break up both numbers and recombine.

$$364 = 300 + 60 + 4$$

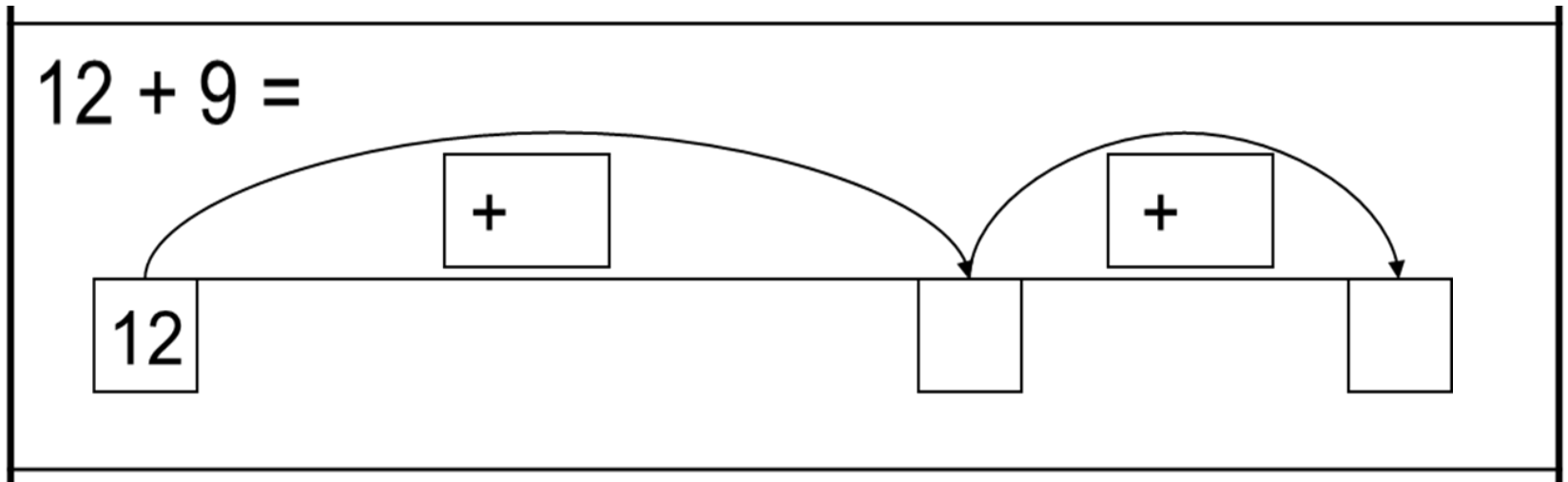
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Partitioning



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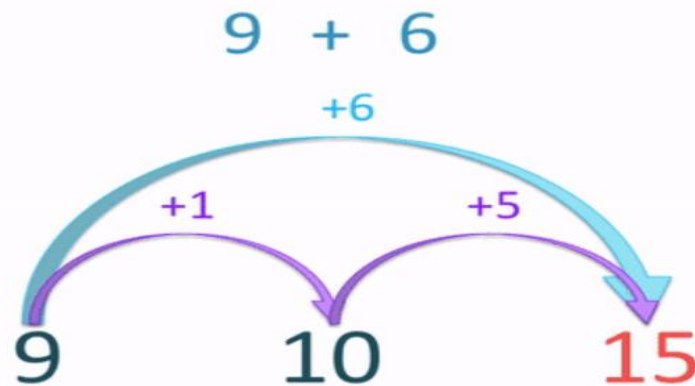


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P2 Partitioning

Add to the next 10 and then add on the rest

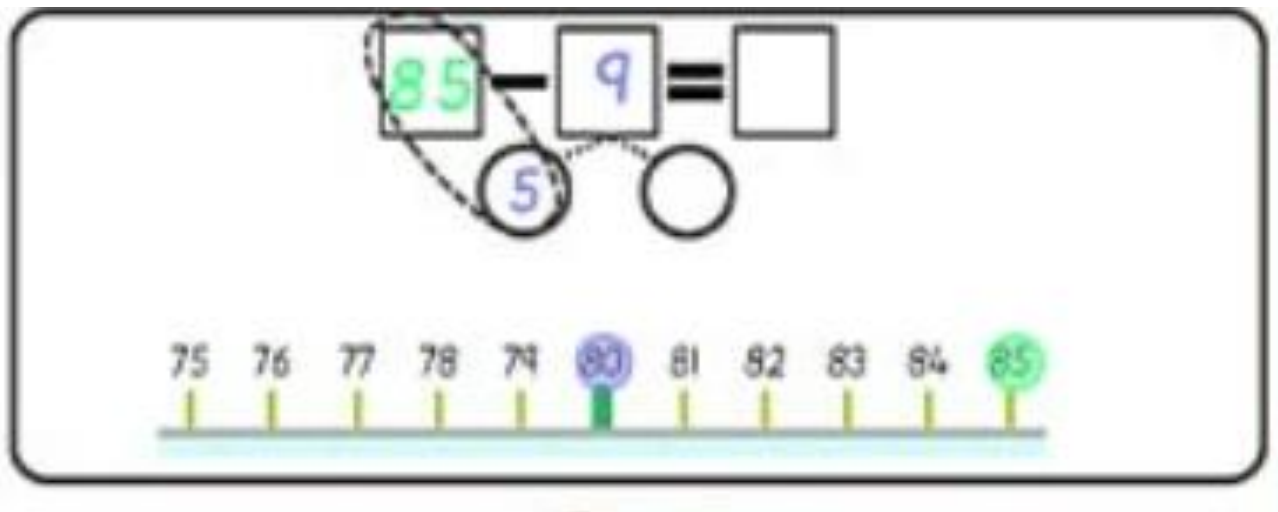


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P3 Partitioning



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P4 Partitioning

1

Partition both 2-digit numbers into tens and ones.

$$\begin{array}{r} 24 + 35 = \\ \downarrow \downarrow \downarrow \downarrow \\ 20 + 4 + 30 + 5 \end{array}$$


2

Add the tens.

$$20 + 30 = 50$$


3

Add the ones.

$$4 + 5 = 9$$


4

Add the two answers to make the total.

$$50 + 9 = 59$$




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Inverse Operation

Inverse Operations

Use the relationships between
addition, subtraction,
multiplication and division.

$$7 \times 2 = 14$$

$$14 \div 2 = 7$$

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In or Out

Find the missing number in each function machine.

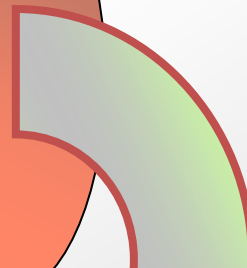
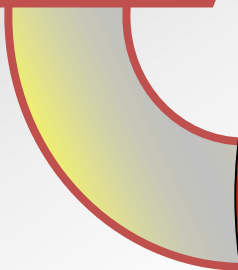
24

IN

+ 4

OUT

28



76

IN

- 6

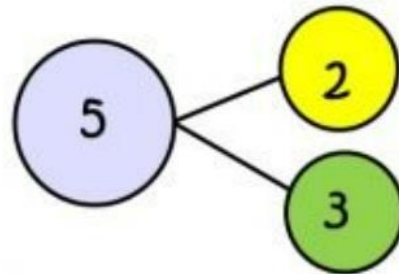
OUT

70



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P2 Inverse Operation



$$\begin{array}{r} \boxed{3} + \boxed{2} = \boxed{5} \\ \boxed{2} + \boxed{3} = \boxed{5} \\ \boxed{5} - \boxed{2} = \boxed{3} \\ \boxed{5} - \boxed{3} = \boxed{2} \end{array}$$

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P3 Inverse Operation

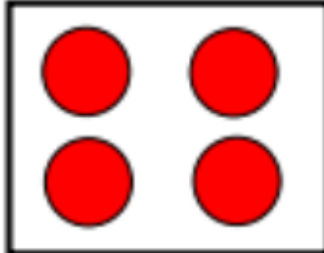
Doubling and Halving



Half of 12 is ____

So

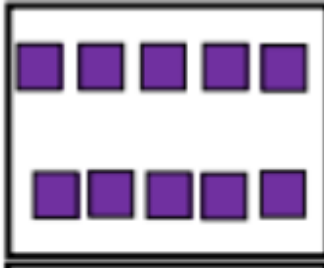
Double 6 is ____



Half of ____ is ____

So

Double ____ is ____



Half of ____ is ____

So

Double ____ is ____

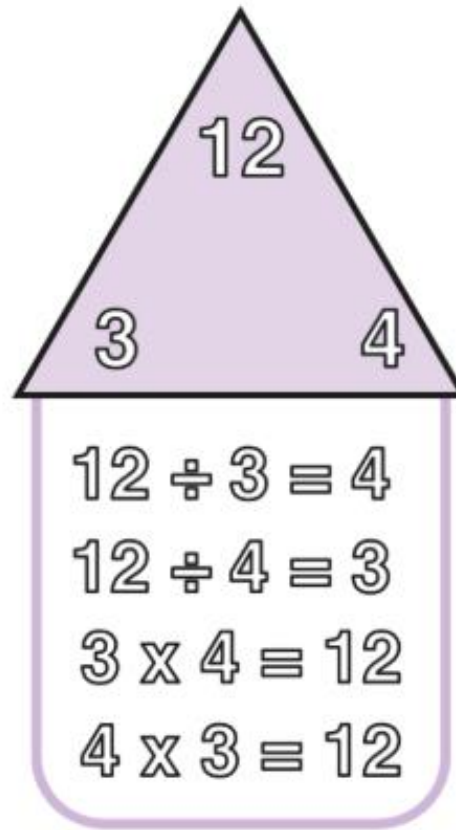
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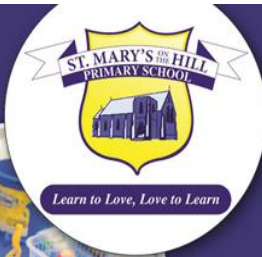
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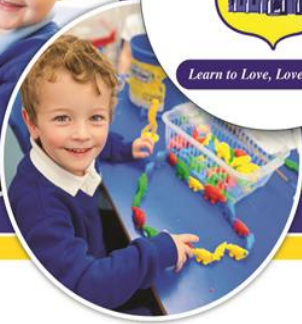
P4 Inverse Operation



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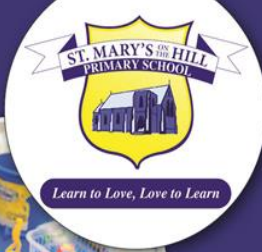
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Ways to help at home

- Be positive and celebrate the maths your child can do – praise what they have done not what they are.
- Maths is not always about being right or wrong – can your child explain the strategy they used to get their answers.

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Ways to help at home

- Don't panic if your child has a different way of working out from you
- You don't have to know all the answers.
- Encourage your child to have a go – remember making mistakes will help them to improve and grow.
- List of websites.

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Encourage your child to practise addition and subtraction to 20. This will help them derive related facts such as:

$$3 + 7 = 10$$



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Ways to help at home

- Use the language of addition and subtraction:
*e.g. add, altogether, more, plus, total, and sum
or difference, subtract, minus, less and fewer.*
- Encourage your child to practise number facts within 20 by playing games and making connections between + and -.
- Encourage your child to use a range of methods including objects, drawings, diagrams, and symbols, to help them work out answers.

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Important

- Remember to ask your child to explain how he or she worked out the answer.
- **Expect good results, aim high!!!**

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