



# Maths

## Addition and Subtraction

# Need a coherently planned sequence of lessons to complement this resource?

**Lesson Breakdown**

Below is our suggestion for the most coherent and progressive sequence to teach this area of Planit Maths steps on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order in which they are presented.

**Recall and Use Facts (1): Number Facts up to 10**

This computer game themed lesson is designed to help children secure their understanding of number facts. Children use a range of methods to investigate and check if they are correct. They use different representations to support their learning. This lesson includes Diving into Mastery activity cards with fluency resources.

**NC Statement:** Recall and use facts to 20 fluently and derive and use related facts up to 100.

**Lesson Aim:** To recall and use number facts up to 10.

**Recall and Use Facts (2): Number Facts up to 20**

This lesson teaches children to use familiar number facts to solve and create problems. Children are encouraged to use different representations to support their learning. This lesson includes Diving into Mastery activity cards with fluency resources.

**NC Statement:** Recall and use facts to 20 fluently and derive and use related facts up to 100.

**Lesson Aim:** To recall and use number facts up to 20.

**Solve Problems (1): Using Different Representations to Solve Problems**

Children learn to solve addition and subtraction problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods. This lesson includes Diving into Mastery activity cards with fluency resources.

**NC Statement:** Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods.

**Lesson Aim:** To solve addition and subtraction problems using objects, pictures and models.

**Introduction**

In this unit, children will learn to recall and use addition and subtraction facts. They use a variety of different models, images and equipment to build their number sense, enabling them to use facts flexibly. They learn different strategies to help them add and subtract numbers efficiently, explaining their methods with concrete resources or jottings. Methods include: adding a unit to a ten, adding three single-digit numbers and adding and subtracting multiples of ten leading to pairs of two-digit numbers. They find the difference between numbers and reason about when it is quicker to find the difference or take away. They build up their understanding of commutativity and inverse relationships, using these to solve increasingly complex missing number problems. They apply their learning to problem-solving, and are able to ask questions, explain their choices and demonstrate their methods.

**Resources**

In addition to your standard maths resources, you will need:

- digital cameras

**Assessment Statements**

By the end of this unit;

children working towards the expected level will be able to:

- recall and use at least four out of six number facts to ten and derive their associated subtraction facts;
- add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required;
- explain their addition and subtraction methods verbally, in pictures or using apparatus;
- understand that two numbers can be added in any order and the answer will be the same.

children working at the expected level will be able to:

- recall number facts to add and within ten and subtraction facts. Use these to derive number and within 20 and 100;
- add and subtract within 100: a two-digit number and ones, a two-digit number and tens, two two-digit numbers;
- add three one digit numbers using efficient methods;
- understand that addition is commutative but subtraction is not, and explain what this means;
- use the inverse relationship between addition and subtraction to solve problems and check their calculations;
- solve addition and subtraction problems in context of quantities and measures, using pictures and mentally.

**Addition and Subtraction**

Maths | Year 2 | Steps to Progression Overview

The aim of this overview is to support teachers using Planit Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within Planit Maths. Whenever possible, lesson packs have been matched to each of the small steps on the White Rose Maths scheme of learning.

**Yearly Overview**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction					Measurement: Money		Number: Multiplication and Division		
Spring	Number: Multiplication and Division		Statistics		Geometry: Properties of Shape			Number: Fractions		Measurement: Length and Height Consolidation		
Summer	Position and Direction		Problem Solving and Efficient Methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations			

See our [Addition and Subtraction Steps to Progression](#) document.

Twinkl Planit is our award-winning scheme of work with over 4000 resources.



# Add Two 2-Digit Numbers, Not Crossing 10



twinkl

# Aim

- To add two 2-digit numbers by adding the ones (not crossing 10) and the tens.

# Success Criteria

- I can add ones not crossing ten.
- I can use number facts to add two 2-digit numbers.
- I can use a number line to add two 2-digit numbers.

# Remember It

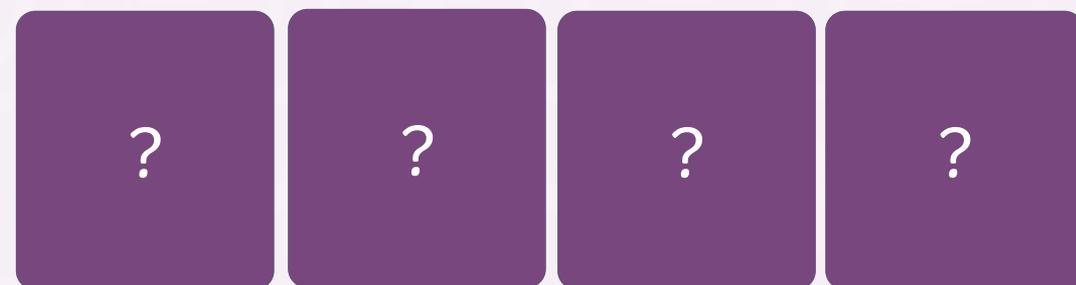
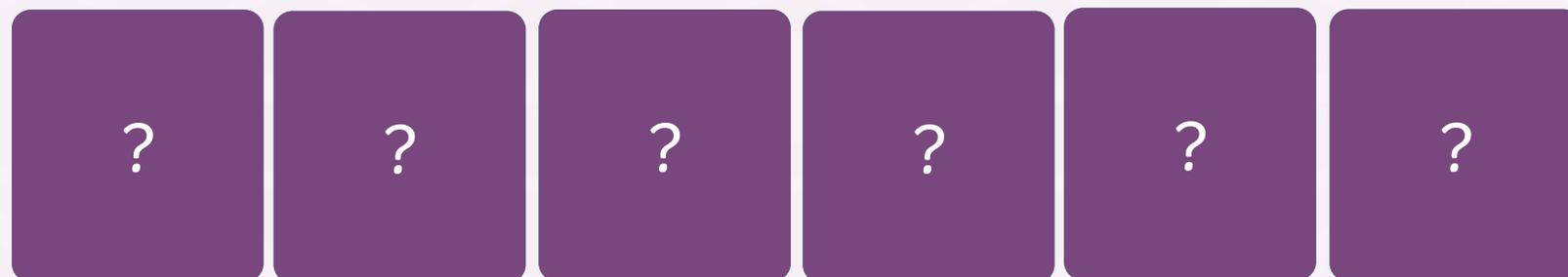


The team have played a lot of games. They have put their scores on cards. They need exactly 20 points to win the competition.

In your class teams, take turns to pick a card until each team has 2 cards. Add the numbers on the 2 cards. The team with the closest value to 20 wins a point.

Play the game again. Now you know where some of the cards are, can you get closer? Can you use your turn to block the other teams?

# Remember It



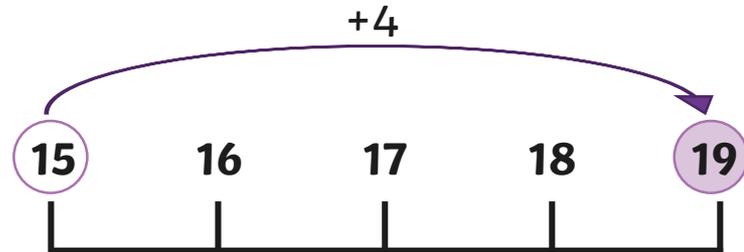
# How Would You Add?



I scored these points. Can you help me find the total?



Put the number with the greatest value in your head so there are fewer steps to count on.



Which number would you put first in a calculation?

$$\boxed{?} + \boxed{?} = 19$$

Can you explain why?

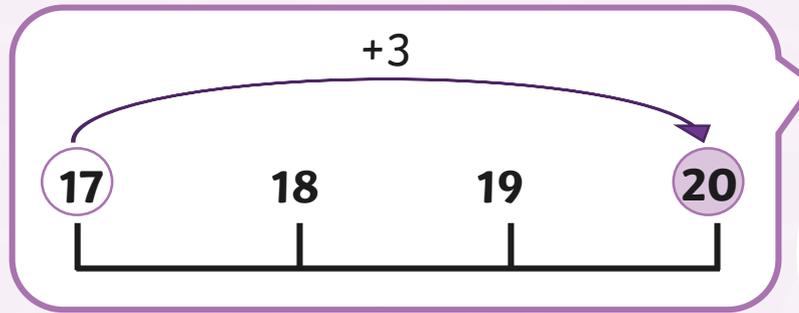


# How Would You Add?



I scored these points. Can you help me find the total?

Put the number with the greatest value in your head so there are fewer steps to count on.



Which number would you put first in a calculation?

$$\boxed{?} + \boxed{?} = 20$$

Can you explain why?



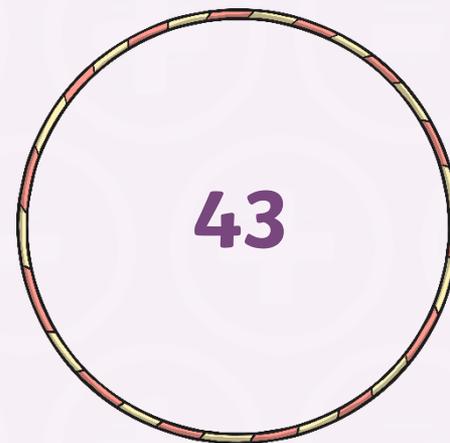
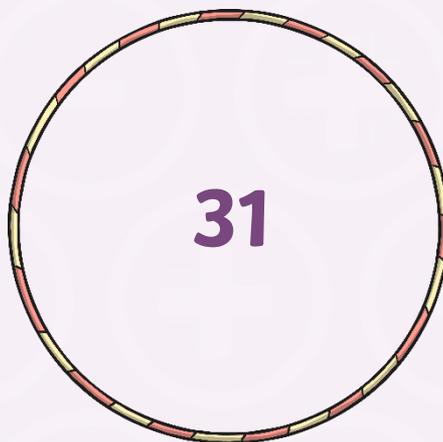
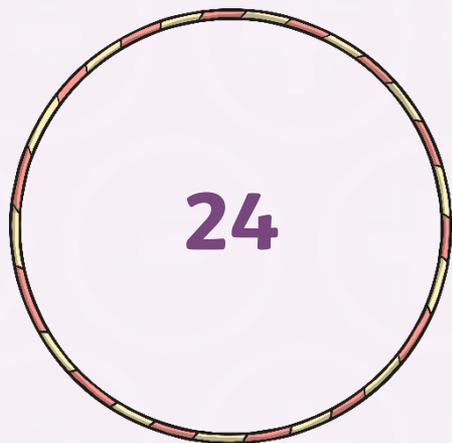
What if I scored 2 and 17 points?

# Scoring Points



Amia throws two beanbags which land in different hoops. She scores the highest possible score.

What did she score?



# Scoring Points



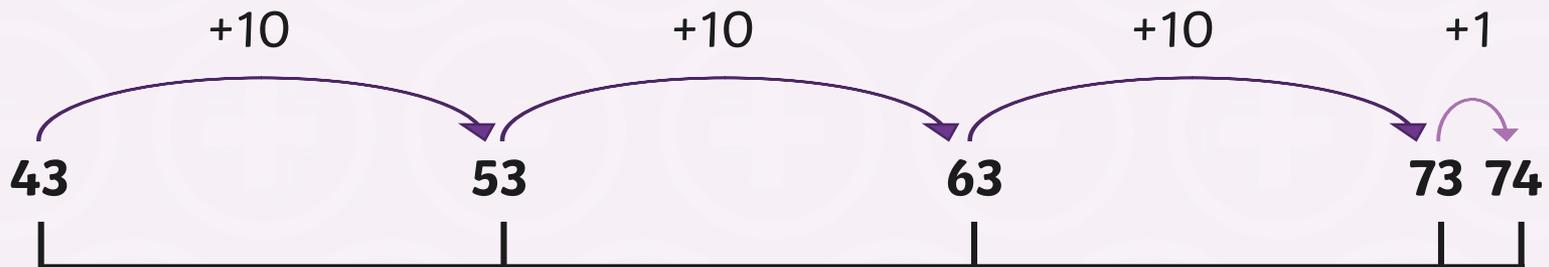
$$43 + 31 = 74$$

Amia uses an empty number line to work out her score.



I need to add 31 and 43.

Start with the greatest number.  
Count on in tens then ones.



# Scoring Points



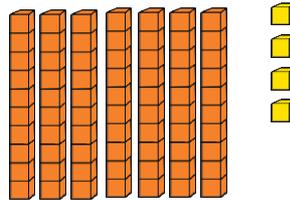
Ben and Phil can check Amia's total by using number facts that they know.



$$43 + 31 = 74$$

Let's put the tens and the ones together.

$$70 + 4 = 74$$



I'll add the ones.

$$3 + 1 = 4$$

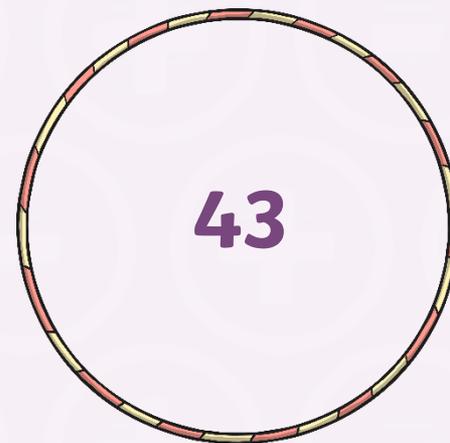
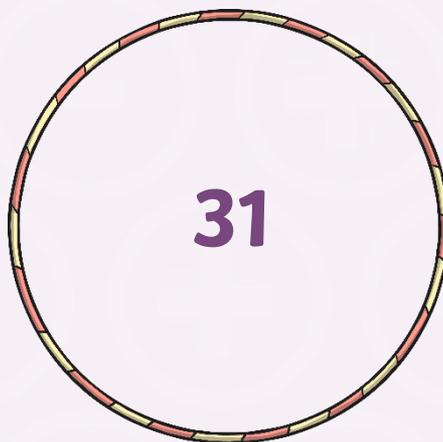


# Scoring Points



Ben throws two beanbags into different hoops and scores the lowest possible score.

What did he score?



# Scoring Points



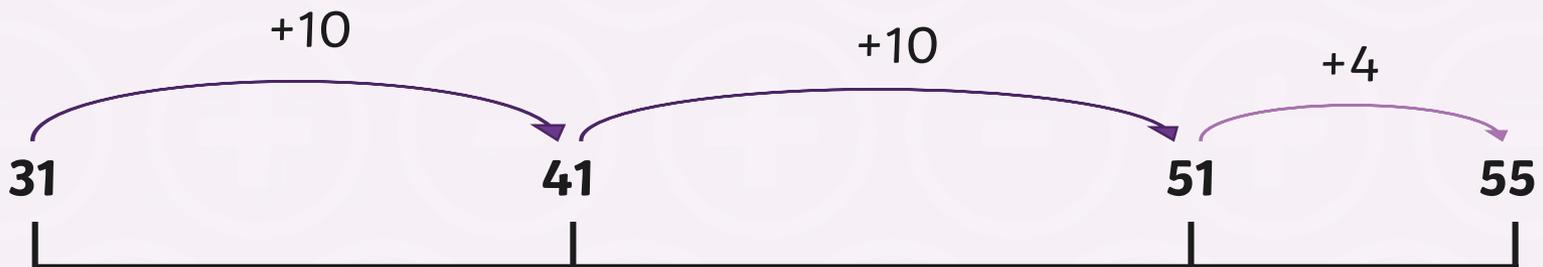
$$31 + 24 = 55$$

Ben uses an empty number line to find his score.



I need to add 24 and 31.

Start with the greatest number.  
Count on in tens then ones.



# Scoring Points



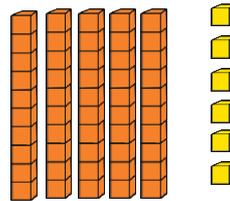
Amia and Phil can check Ben's total by using number facts that they know.

$$32 + 24 = 56$$



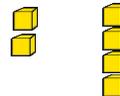
Let's put the tens and the ones together.

$$50 + 6 = 56$$



I'll add the ones.

$$2 + 4 = 6$$



# Scoring Points



Phil's score is the closest score to 70.

What did he score?

24

31

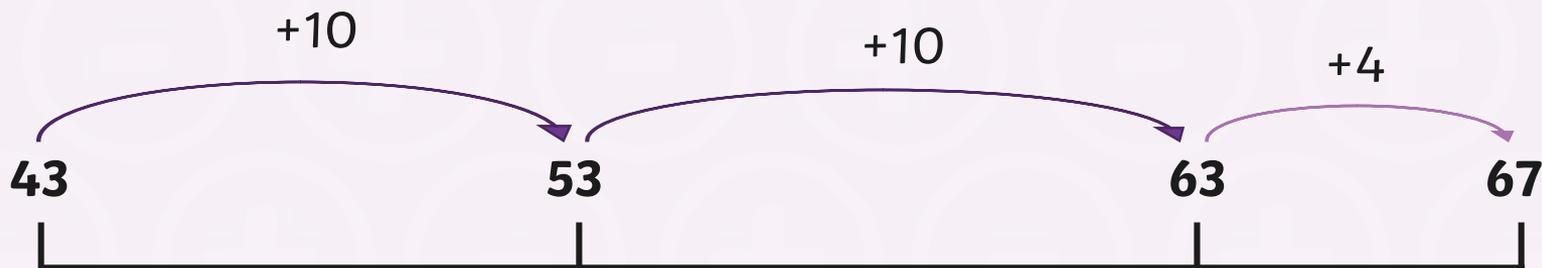
43

What will you do to check your answer?

# Scoring Points



$$43 + 24 = 67$$



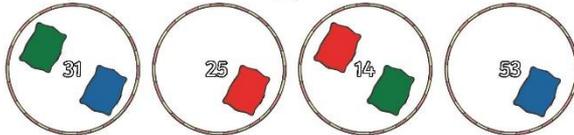
# Scoring Points Activity



## Scoring Points

To add two 2-digit numbers by adding the ones (not crossing 10) and the tens. ○○○○

Each friend threw 2 beanbags into the hoops. What are their scores? Use number facts or number lines to help you.



Amia

I threw the red beanbags.



Phil

I threw the green beanbags.



Ben

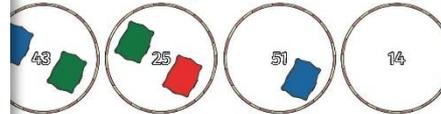
I threw the blue beanbags.

How many different scores could you make by throwing 2 beanbags into different hoops?

## Scoring Points

To add two 2-digit numbers by adding the ones (not crossing 10) and the tens. ○○○○

Each friend threw 2 beanbags into 2 different hoops. They each got different scores. What are their scores? Use number facts or number lines to help you.



I threw the red beanbags.



I threw the green beanbags.



I threw the blue beanbags.

How many different scores could you make by throwing 2 beanbags in different hoops? Order the totals from the lowest to the highest total?

## Scoring Points

To add two 2-digit numbers by adding the ones (not crossing 10) and the tens. ○○○○

Each friend threw 2 beanbags into 2 different hoops. They each got different scores. What are their scores? Use number facts or number lines to help you.



I threw the red beanbags.



I threw the green beanbags.



I threw the blue beanbags.

How many different scores could you make by throwing 2 beanbags in the hoops? Order the totals from the highest to the lowest value?

## Diving into Mastery

Dive in by completing your own activity!



### Add Two 2-Digit Numbers, Not Crossing Ten

The friends played 2 games each.

What did they each score in total?

 Ben

$25 + 22 = \square$

25      35      45     

+10    +10    +2

 Amia

$36 + 23 = \square$

36                 

+10    +10    +3

 Phil

$45 + 34 = \square$

45                       

Now, use your number facts to solve these calculations:

$51 + 26 = \square$

$63 + 34 = \square$

# One Hundred Square



Try adding 2-digit numbers using the 100 square.

Click the numbers to highlight which ones you are adding.

What do you notice?

Reset grid

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

# Aim



- To add two 2-digit numbers by adding the ones (not crossing 10) and the tens.

# Success Criteria

- I can add ones not crossing ten.
- I can use number facts to add two 2-digit numbers.
- I can use a number line to add two 2-digit numbers.

