

Add two-digit numbers and ones

National Curriculum attainment target

- Add numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and ones

Lesson objective

- Add two-digit numbers and ones

Previous related lessons

Unit 2, Week 2, Lessons 1 & 2

Prerequisites for learning

Pupils need to:

- recall addition facts to 20 with confidence
- identify the tens and ones digits in a two-digit number
- be confident in their use of a 1–100 number square and number line
- add multiples of ten and ones

Vocabulary

ones (units), tens, addition, add, plus, more, make, total, altogether, equals, how many?

Future related lessons

Unit 5, Week 2, Lesson 2; Unit 7, Week 1, Lessons 1, 2 & 4; Unit 7, Week 2, Lessons 1 & 2

Success criteria

Pupils can:

- use a 1–100 number square and number line to add a two-digit number and ones
- count on to add ones to a two-digit number
- accurately cross the tens boundary when adding a two-digit number and ones



i This lesson uses two familiar models and images to teach children the concept of adding two-digit numbers and ones: the 1–100 number square and the 1–100 number line. Prior to teaching this lesson, teachers should decide whether it is appropriate to use both of these resources to teach this concept or only one and, if so, which resource.

Getting Started

- Choose an activity from Number – Addition and subtraction.
- Choose a game or activity from *Fluency in Number Facts: Y1/Y2* – Addition and subtraction.

**Collins
Connect**
Year 2, Unit 5,
Week 2

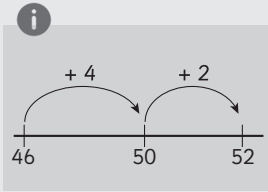
Teach

Resources

Resource 4: 1–100 number square (per child); Resource 68: 1–100 number line (per child)

- Remind children of the following concepts/facts concerning addition:
 - addition can be done in any order (commutative law)
 - adding multiples of ten and ones, e.g. $50 + 8$.
- Say: **Today we are going to be adding ones to a two-digit number that is not a multiple of ten.**
- Display: the Number Square tool and give each child their own 1–100 number square.
- Ask: **How can you use your number square to work out the answer to 12 plus six?** Congratulate children who suggest the previously learned technique of putting the larger number first and counting on.
- Highlight 12 on the number square. Invite a child to count on six to the right and highlight each of the numbers (13, 14, 15, 16, 17, 18) as they do.
- Ask: **What is the answer to 12 add six and how do you know?** (18 – the number that was reached after counting on 6; the last coloured number)
- Ask: **What is the total of four and 23? Use your number square to work out the answer.**
- Say: **Check your work with your partner.**
- Invite a child to the board to demonstrate how they worked out the answer.
- Repeat for $41 + 8$ and $75 + 3$.
- Say: **So far each answer has had the same number of tens as the question. Now we are going to answer questions that will need you to cross a tens boundary.**
- Ask: **What is 36 plus seven? Use your number square to work out the answer.**
- Say: **Check your work with your partner.**
- Invite a child to the board to demonstrate how they worked out the answer.
- Draw children's attention to the need to move onto the next row of the number square when crossing a tens boundary.





- Repeat for $57 + 6$ and $84 + 9$.
- Display: the Number Line tool and give each child their own 1–100 number line.
- Ask: **How can you use your number line to work out the answer to 14 plus five?** Children's answers should demonstrate increased understanding having already used the number squares.
- Use the Number Line tool to demonstrate counting on five from 14. Invite a child to drag a snail marker to 14 and then count on five, marking each jump to the right as they count.
- Ask: **What is the answer to 14 add five and how do you know?** (19 – the number that was reached after counting on five; the number reached with the last jump)
- Repeat for $32 + 9$, $45 + 3$, $67 + 8$ and $76 + 7$.
- Use the example $46 + 6$ to demonstrate that jumps don't always have to be individual numbers.
- Move a snail marker to 46 and draw one large jump to the right from 46 to 50. Ask: **What number have I added with that jump?** (4) Write + 4 above the jump.
- Ask: **How many more do we still need to add to add six in total?** (two because four plus two equals six) **What is 50 plus two?** (52) Draw a second jump from 50 to 52 and write + 2 above it.
- Explain that adding four and then adding two is the same as adding six in one go because four plus two equals six.
- Say: **You can decide whether you prefer to use a number square or number line to help you in this lesson.**

Individualised Learning

Refer to Activity 1 from the Learning activities on page 236.

Activity Book 2B: – Page 6: Addition detective

Resource: Resource 4: 1–100 number square (per child)

– Extension, Year 2, Unit 5, Week 2, Lesson 1:

Progress Guide 2: Adding dice digits

Resource: 0–9 dice (per child)

Plenary

Resources

0–9 number fan (per child)

- Ask each child to select a one-digit number on their number fan. Invite three children to the front of the class and arrange them into a pair and a single child.
- Say: **I would like the rest of you to add these two numbers together and show me the answer on your number fans.** Invite children to reveal their answers. Check for any errors and identify the source of any confusion.
- Ask the three children to sit back down and say: **Everyone choose another one-digit number.** Choose three different children and arrange them as before.
- Ask: **What is** (say the two-digit number) **plus** (say the one-digit number)? Invite children to reveal their answers using their number fans. Once again, check for any errors and identify the source of any confusion.
- Repeat for further groups of three children.