MATHS

Lesson 12

Year 1

Topic: Number and place value

Partitioning two-digit numbers

Lesson concepts

- (O/M) Number — Quantity
- (O/M) Number — Counting
- (O/M) Addition and subtraction — Part–part–whole (partitioning)
- (O/M) Representations — Concrete
- (O/M) Representations — Symbolic

Today students will:

► use standard place value partitioning to represent two-digit numbers.

Resources

Find and prepare

Bundling materials (for example: blocks/beads/shells/pasta/counters and resealable bags or paper plates; iceblock sticks and rubber bands)

Counters

Sheets

Sheet 6 — Thinkboard: Partitioning Folded cards (cut out)

Ten frame

Key terms

partitioning, part–part–whole model

For definitions and explanations of terms, please see the Glossary.

Lesson

Introduce the lesson

> #### Explain to students
>
> " In this lesson, you will partition, or break up, two-digit numbers into parts of 10 and another part. "

> #### Say to students
>
> " Twenty (point to the 20 number card) and five (point to the 5 number card) make twenty-five. Twenty and five is the same as twenty-five. I can record that by writing 20 and 5 equals 25. "

- Write the matching number sentence '20 and 5 = 25'.
- Ask students to select two or more of the following:
  ◦ say the number (25)
  ◦ write the numeral and number word
  ◦ draw a representation of 25 (such as 25 dots)
  ◦ show 25 using bundling sticks
  ◦ show 25 using counters and copies of Ten frame
  ◦ record 20 and 5 as the parts, and 25 as the whole on a part–part–whole model.

> #### Focus questions
>
> Q. *What are the tens and ones parts of this number?*
> A. There are 2 tens and 5 ones, which is the same as a part of 20 and a part of 5.
>
> Q. *How does saying the number help you identify the parts of the whole?*
> A. For example: You can hear there are two parts, 'twenty' and 'five', when you say the word 'twenty-five'.

Record standard place value partitions of two-digit numbers

- Have students complete the following task, and use the focus questions below to support. (**Note:** The two-digit number 31 is used as an example.)
- Ask students to:
  ◦ select another two-digit number and show the number with blocks
  ◦ point and count in 10s to 30 (that is, say '10, 20, 30')
  ◦ find the 30 folded number card and place it behind the 30 blocks
  ◦ point to and count the other part (1)
  ◦ find the 1 folded number card and place it behind the 1 block
  ◦ split the cards to reveal both numbers
  ◦ identify the parts (30 and 1)
  ◦ make the whole again (31)
  ◦ describe the parts and the whole.

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Focus questions

Q. *What is the whole?*

A. For example: 31

Q. *What are the two parts that make the whole?*

A. For example: 30 and 1

Q. *Which is the larger/smaller part?*

A. For example: The larger part is 30; the smaller part is 1.

Q. *How do the number cards match the blocks?*

A. For example: The 30 blocks are shown by the 30 number card, and the 1 block is shown by the 1 number card.

Q. *How could you describe the parts and whole?*

A. The parts are 30 and 1, and the whole is 31.

Q. *What would I have to do to the blocks and folded cards to make 32?*

A. Add one more block and replace number 1 card with number 2 card.

- Display **Sheet 6 —** Thinkboard: Partitioning (or alternatively make your own).

- Explain that students will now use the thinkboard to show the partitioning of a number.

- Ask students to:

  ◦ select a two-digit number to partition using tens and ones

  ◦ represent the partitions using materials

  ◦ draw a representation of the two-digit number in the 'Draw it' section

  ◦ write the matching number sentence in the 'Write it' section.