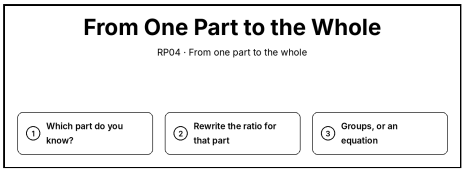
From One Part to the Whole: teacher script

RP04-V1 · RP04 From one part to the whole · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 97 seconds as a video.

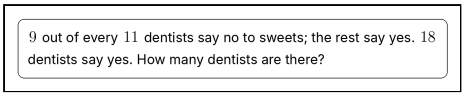
01



Say. From one part to the whole. Which part do you know? Rewrite the ratio for that part. Then use groups, or an equation.

Draw. Write the title “From One Part to the Whole” and the steps: 1. Which part do you know?; 2. Rewrite the ratio for that part; 3. Groups, or an equation.

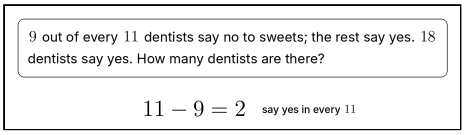
02



Say. 9 out of every 11 dentists say no to sweets, and the rest say yes. 18 dentists say yes. How many dentists are there?

Draw. Clear the board. Write “9 out of every 11 dentists say no to sweets; the rest say yes. 18 dentists say yes. How many dentists are there?” in a box at the top.

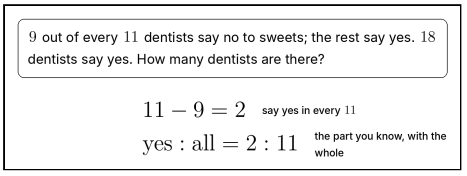
03



Say. In every group of 11, 11 minus 9 is 2 dentists who say yes.

Draw. Write 11 − 9 = 2 on the next line. Beside it, write “say yes in every 11”.

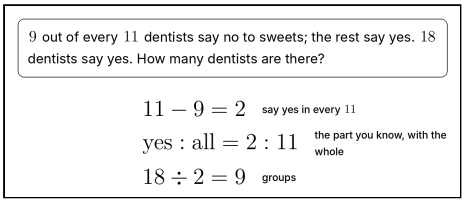
04



Say. Yes to all is 2 to 11. This ratio links the dentists you know about with all the dentists.

Draw. Write yes : all = 2 : 11 on the next line. Beside it, write “the part you know, with the whole”.

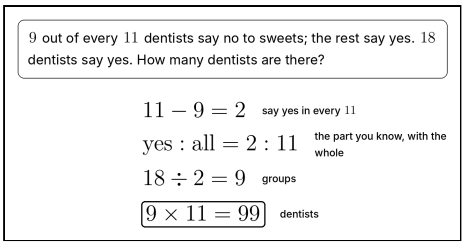
05



Say. 18 divided by 2 is 9 groups.

Draw. Write 18 ÷ 2 = 9 on the next line. Beside it, write “groups”.

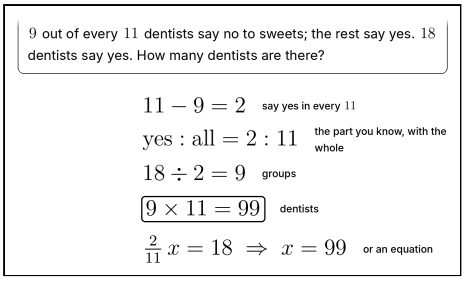
06



Say. 9 groups of 11 is 99 dentists.

Draw. Write 9 × 11 = 99 and box it on the next line. Beside it, write “dentists”.

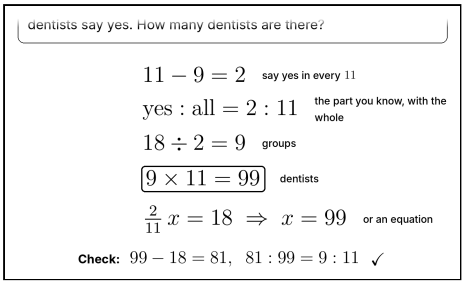
07



Say. Or with an equation: two elevenths of all the dentists is 18, so there are 99.

Draw. Write 2/11 x = 18 ⇒ x = 99 on the next line. Beside it, write “or an equation”.

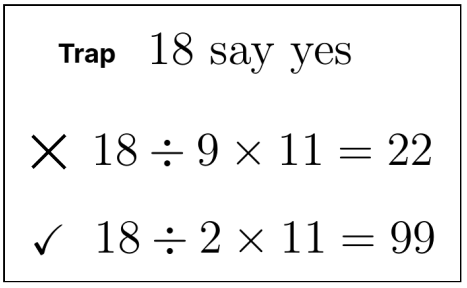
08



Say. Check: 99 minus 18 is 81 who say no, and 81 to 99 is 9 to 11.

Draw. Below, write “Check: 99 − 18 = 81, 81 : 99 = 9 : 11” and tick it ✓.

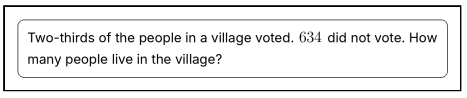
09



Say. Watch for the trap: matching the number to the wrong part. The 18 dentists say yes, so 18 goes with the 2, not the 9.

Draw. Clear the board. Write “Trap” and 18 say yes. Below, write 18 ÷ 9 × 11 = 22 and cross it out ×. Then write 18 ÷ 2 × 11 = 99 with a tick ✓.

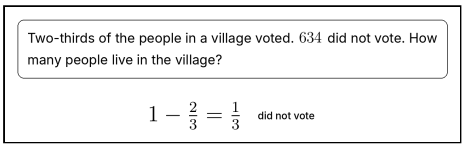
10



Say. Two thirds of the people in a village voted. 634 did not vote. How many people live there?

Draw. Clear the board. Write “Two-thirds of the people in a village voted. 634 did not vote. How many people live in the village?” in a box at the top.

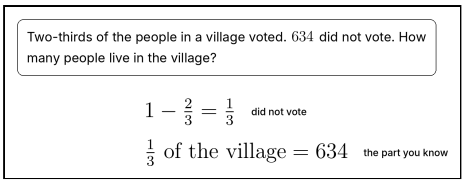
11



Say. One third of the village did not vote.

Draw. Write 1 − 2/3 = 1/3 on the next line. Beside it, write “did not vote”.

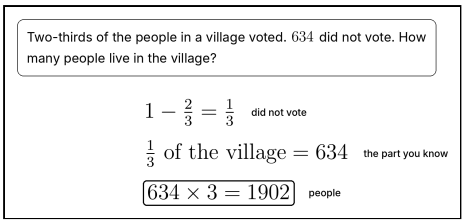
12



Say. Those 634 people are the part you know: one third of the village.

Draw. Write 1/3 of the village = 634 on the next line. Beside it, write “the part you know”.

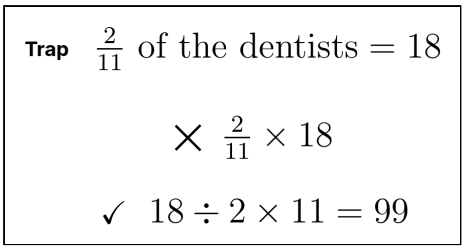
13



Say. 634 times 3 is one thousand nine hundred and two people.

Draw. Write 634 × 3 = 1902 and box it on the next line. Beside it, write “people”.

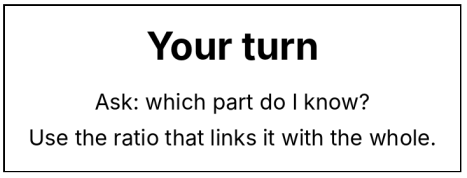
14



Say. And watch for this trap: taking a fraction of the part. Two elevenths is a fraction of all the dentists, not of the 18.

Draw. Clear the board. Write “Trap” and 2/11 of the dentists = 18. Below, write 2/11 × 18 and cross it out ×. Then write 18 ÷ 2 × 11 = 99 with a tick ✓.

15



Say. Now it is your turn. Ask which part you know, and use the ratio that links it with the whole.

Draw. Point to today’s activity: Ask: which part do I know? Use the ratio that links it with the whole.