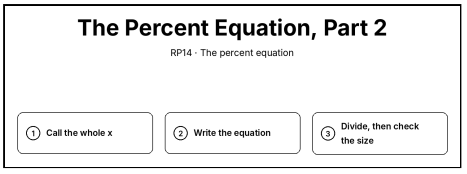
The Percent Equation, Part 2: teacher script

RP14-V2 · RP14 The percent equation · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 83 seconds as a video.

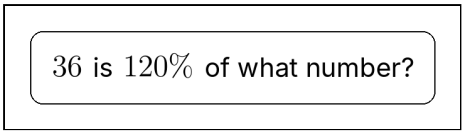
01



Say. The percent equation, part 2. When the whole is unknown, call the whole x. Write the equation. Then divide, and check the size.

Draw. Write the title “The Percent Equation, Part 2” and the steps: 1. Call the whole x; 2. Write the equation; 3. Divide, then check the size.

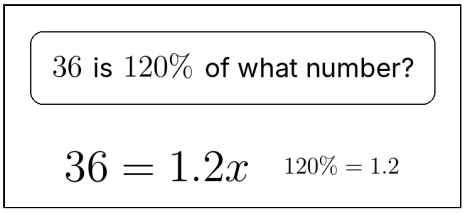
02



Say. 36 is 120 percent of what number?

Draw. Clear the board. Write “36 is 120\% of what number?” in a box at the top.

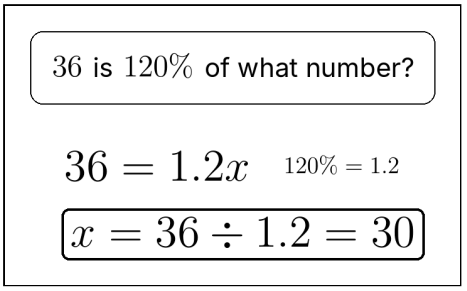
03



Say. 36 is 120 percent of x: 36 equals 1.2 x.

Draw. Write 36 = 1.2x on the next line. Beside it, write “120\% = 1.2”.

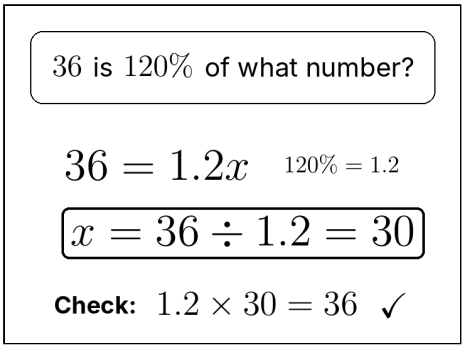
04



Say. Divide both sides by 1.2: x is 30.

Draw. Write x = 36 ÷ 1.2 = 30 and box it on the next line.

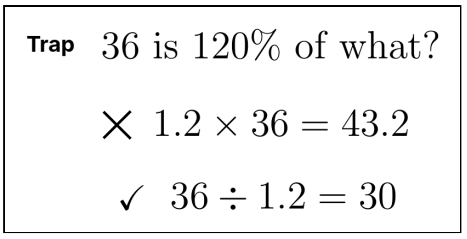
05



Say. Check: 1.2 times 30 is 36. And 120 percent of the whole is more than the whole, so the whole must be less than 36.

Draw. Below, write “Check: 1.2 × 30 = 36” and tick it ✓.

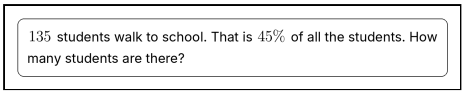
06



Say. Watch for the trap: multiplying when the whole is unknown. 1.2 times 36 takes 120 percent of the part. Divide instead.

Draw. Clear the board. Write “Trap” and 36 is 120\% of what?. Below, write 1.2 × 36 = 43.2 and cross it out ×. Then write 36 ÷ 1.2 = 30 with a tick ✓.

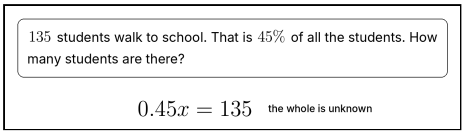
07



Say. 135 students walk to school. That is 45 percent of all the students. How many students are there?

Draw. Clear the board. Write “135 students walk to school. That is 45\% of all the students. How many students are there?” in a box at the top.

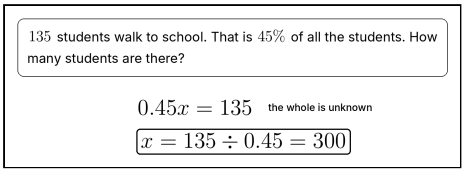
08



Say. Call all the students x. 45 percent of x is 135: 0.45 x equals 135.

Draw. Write 0.45x = 135 on the next line. Beside it, write “the whole is unknown”.

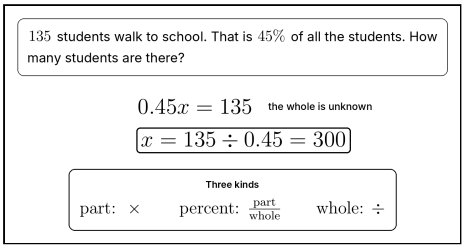
09



Say. Divide by 0.45: there are 300 students.

Draw. Write x = 135 ÷ 0.45 = 300 and box it on the next line.

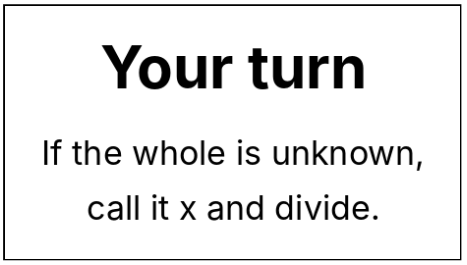
10



Say. So there are three kinds. To find the part, multiply. To find the percent, divide the part by the whole. To find the whole, divide by the percent.

Draw. Write the rule in a box: part: × percent: part/(whole) whole: ÷.

11



Say. Now it is your turn. If the whole is unknown, call it x and divide.

Draw. Point to today’s activity: If the whole is unknown, call it x and divide.