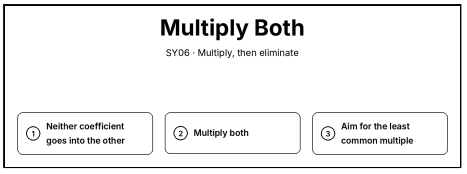
Multiply Both: teacher script

SY06-V2 · SY06 Multiply, then eliminate · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 59 seconds as a video.

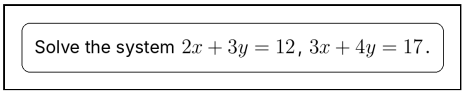
01



Say. Multiply both. Neither coefficient goes into the other? Then multiply both equations, each by the number that makes the least common multiple.

Draw. Write the title “Multiply Both” and the steps: 1. Neither coefficient goes into the other; 2. Multiply both; 3. Aim for the least common multiple.

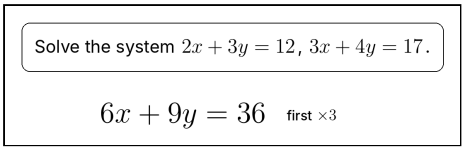
02



Say. Solve the system 2x + 3y = 12 and 3x + 4y = 17.

Draw. Clear the board. Write “Solve the system 2x + 3y = 12, 3x + 4y = 17.” in a box at the top.

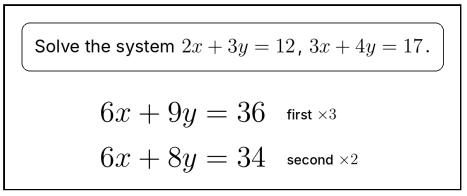
03



Say. To cancel x, aim for 6x. Times three: 6x + 9y = 36.

Draw. Write 6x + 9y = 36 on the next line. Beside it, write “first × 3”.

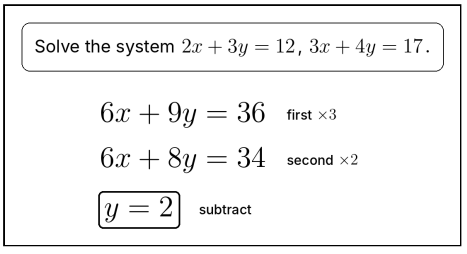
04



Say. Times two: 6x + 8y = 34.

Draw. Write 6x + 8y = 34 on the next line. Beside it, write “second × 2”.

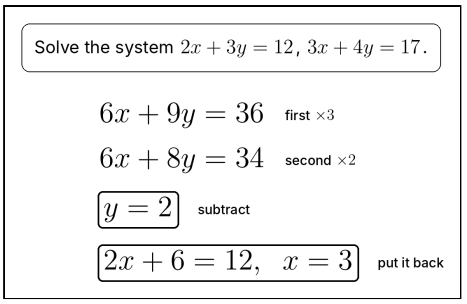
05



Say. Both have 6x, so subtract: y = 2.

Draw. Write y = 2 and box it on the next line. Beside it, write “subtract”.

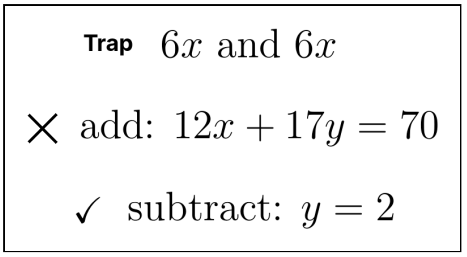
06



Say. Put it back: 2x + 6 = 12, so x = 3. The solution is three, two.

Draw. Write 2x + 6 = 12, x = 3 and box it on the next line. Beside it, write “put it back”.

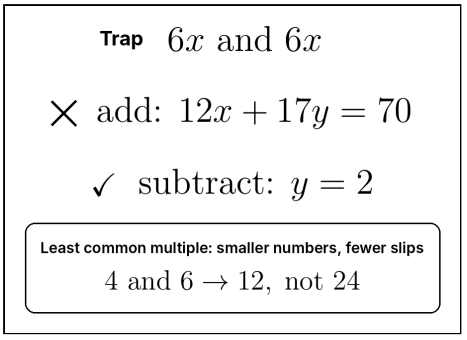
07



Say. Watch for the trap: adding equal coefficients. 6x and 6x cancel only when you subtract.

Draw. Clear the board. Write “Trap” and 6x and 6x. Below, write add: 12x + 17y = 70 and cross it out ×. Then write subtract: y = 2 with a tick ✓.

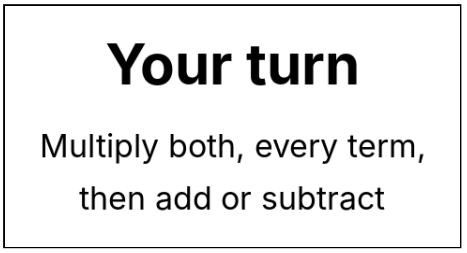
08



Say. Least common multiple: smaller numbers, fewer slips.

Draw. Write the rule in a box: 4 and 6 \to 12, not 24.

09



Say. Now it is your turn. Multiply both equations, every term, then add or subtract.

Draw. Point to today’s activity: Multiply both, every term, then add or subtract