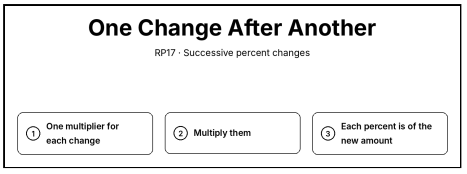
One Change After Another: teacher script

RP17-V1 · RP17 Successive percent changes · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 88 seconds as a video.

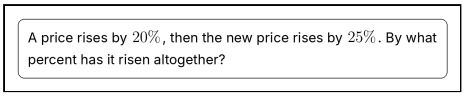
01



Say. One change after another. Use one multiplier for each change, and multiply them. Each percent is of the new amount.

Draw. Write the title “One Change After Another” and the steps: 1. One multiplier for each change; 2. Multiply them; 3. Each percent is of the new amount.

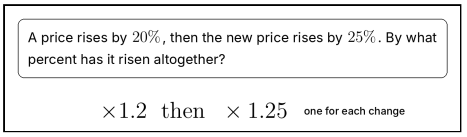
02



Say. A price rises by 20 percent, then the new price rises by 25 percent. By what percent has it risen altogether?

Draw. Clear the board. Write “A price rises by 20\%, then the new price rises by 25\%. By what percent has it risen altogether?” in a box at the top.

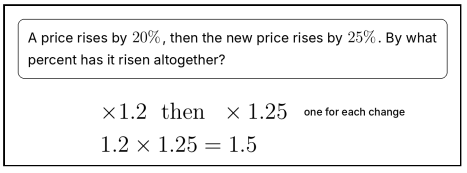
03



Say. One multiplier for each change: times 1.2, then times 1.25.

Draw. Write × 1.2 then × 1.25 on the next line. Beside it, write “one for each change”.

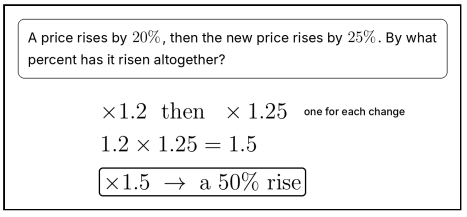
04



Say. Multiply them: 1.2 times 1.25 is 1.5.

Draw. Write 1.2 × 1.25 = 1.5 on the next line.

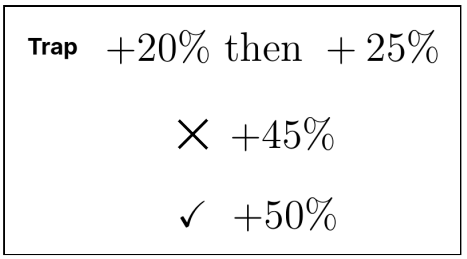
05



Say. Times 1.5 is a 50 percent rise.

Draw. Write × 1.5 \to a 50\% rise and box it on the next line.

06



Say. Watch for the trap: adding the percents. The 25 percent is of the new, bigger price, so the rise is 50 percent, not 45.

Draw. Clear the board. Write “Trap” and +20\% then +25\%. Below, write +45\% and cross it out ×. Then write +50\% with a tick ✓.

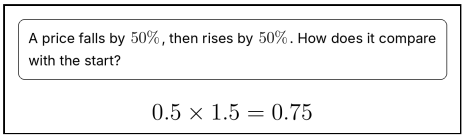
07



Say. A price falls by 50 percent, then rises by 50 percent. How does it compare with the start?

Draw. Clear the board. Write “A price falls by 50\%, then rises by 50\%. How does it compare with the start?” in a box at the top.

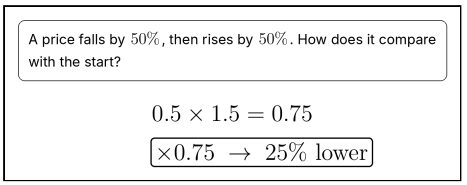
08



Say. Times 0.5, then times 1.5: 0.5 times 1.5 is 0.75.

Draw. Write 0.5 × 1.5 = 0.75 on the next line.

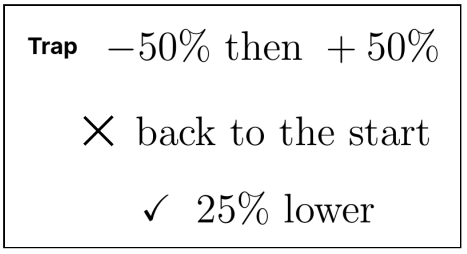
09



Say. So the price ends 25 percent lower than at the start.

Draw. Write × 0.75 \to 25\% lower and box it on the next line.

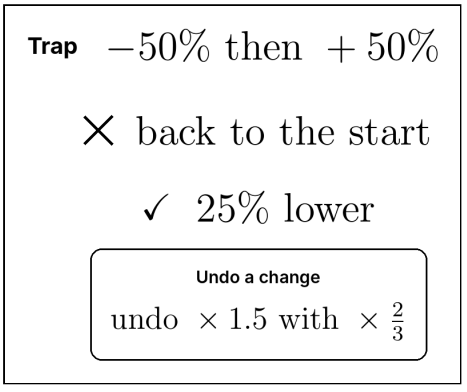
10



Say. Watch for the trap: thinking a 50 percent rise undoes a 50 percent fall. The rise is of a smaller price, so it doesn't undo the fall.

Draw. Clear the board. Write “Trap” and −50\% then +50\%. Below, write back to the start and cross it out ×. Then write 25\% lower with a tick ✓.

11



Say. To undo times 1.5, multiply by 1 over 1.5, that is two thirds: a cut of one third.

Draw. Write the rule in a box: undo × 1.5 with × 2/3.

12

Your turn

One multiplier for each change, and multiply them.

Say. Now it is your turn. Use one multiplier for each change, and multiply them.

Draw. Point to today’s activity: One multiplier for each change, and multiply them.