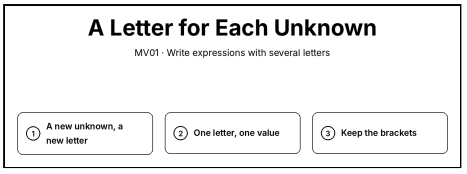
A Letter for Each Unknown: teacher script

MV01-V1 · MV01 Write expressions with several letters · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 84 seconds as a video.

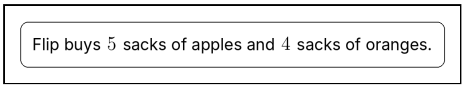
01



Say. A letter for each unknown. A new unknown gets a new letter. In one problem, a letter keeps one value. And when you translate words into maths, keep the brackets.

Draw. Write the title “A Letter for Each Unknown” and the steps: 1. A new unknown, a new letter; 2. One letter, one value; 3. Keep the brackets.

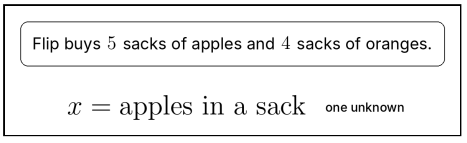
02



Say. Flip buys five sacks of apples and four sacks of oranges. How many pieces of fruit does he have?

Draw. Clear the board. Write “Flip buys 5 sacks of apples and 4 sacks of oranges.” in a box at the top.

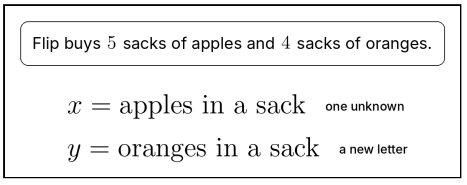
03



Say. Let x be the number of apples in a sack.

Draw. Write x = apples in a sack on the next line. Beside it, write “one unknown”.

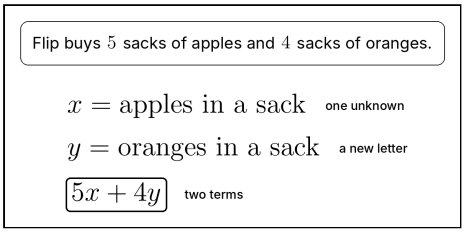
04



Say. The oranges in a sack are a different unknown, so they get a new letter: let y be the number of oranges in a sack.

Draw. Write y = oranges in a sack on the next line. Beside it, write “a new letter”.

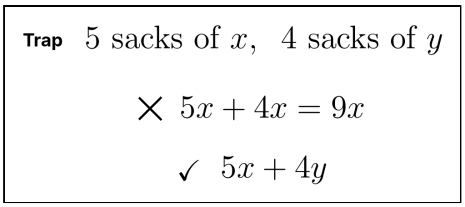
05



Say. Five sacks of x and four sacks of y: 5x + 4y pieces of fruit.

Draw. Write 5x + 4y and box it on the next line. Beside it, write “two terms”.

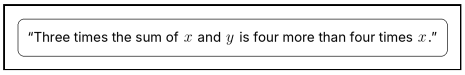
06



Say. Watch for the trap: one letter for two unknowns. Using x for both says the sacks hold the same number, which nobody told us. Two unknowns, two letters.

Draw. Clear the board. Write “Trap” and 5 sacks of x, 4 sacks of y. Below, write 5x + 4x = 9x and cross it out ×. Then write 5x + 4y with a tick ✓.

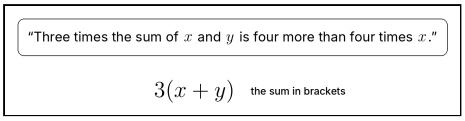
07



Say. Now Captain Hook's riddle: three times the sum of x and y is four more than four times x.

Draw. Clear the board. Write ““Three times the sum of x and y is four more than four times x.”” in a box at the top.

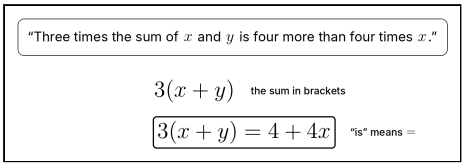
08



Say. Three times the sum: the sum goes in a bracket, 3(x + y).

Draw. Write 3(x + y) on the next line. Beside it, write “the sum in brackets”.

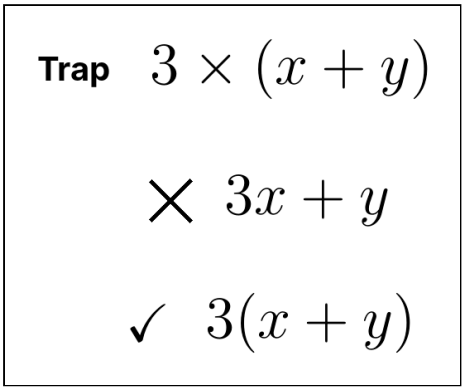
09



Say. Is means equals, and four more than four times x is 4 + 4x.

Draw. Write 3(x + y) = 4 + 4x and box it on the next line. Beside it, write ““is” means =”.

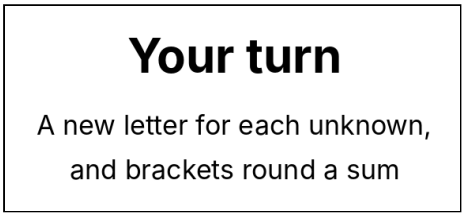
10



Say. Watch for the trap: dropping the bracket. Three times the sum is not 3x + y. The three multiplies the whole sum: 3(x + y).

Draw. Clear the board. Write “Trap” and 3 × (x + y). Below, write 3x + y and cross it out ×. Then write 3(x + y) with a tick ✓.

11



Say. Now it is your turn. A new letter for each unknown, and brackets round a sum.

Draw. Point to today’s activity: A new letter for each unknown, and brackets round a sum