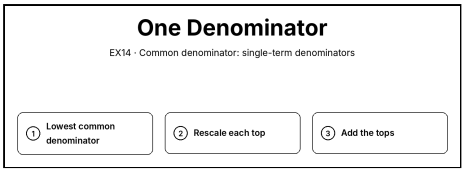
One Denominator: teacher script

EX14-V1 · EX14 Common denominator: single-term denominators · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 73 seconds as a video.

01



Say. One denominator. Find the lowest common denominator, rescale each top to match, then add the tops. The bottom stays.

Draw. Write the title “One Denominator” and the steps: 1. Lowest common denominator; 2. Rescale each top; 3. Add the tops.

02

Write $\frac{x}{2} + \frac{x}{3}$ as one fraction.

Say. Write x over two, plus x over three, as one fraction.

Draw. Clear the board. Write “Write x/2 + x/3 as one fraction.” in a box at the top.

03

Write $\frac{x}{2} + \frac{x}{3}$ as one fraction.

$$\frac{3x}{6} + \frac{2x}{6} \quad \text{LCD } 6$$

Say. Two and three both go into six. x over two is three x over six, and x over three is two x over six.

Draw. Write 3x/6 + 2x/6 on the next line. Beside it, write “LCD 6”.

04

Write $\frac{x}{2} + \frac{x}{3}$ as one fraction.

$$\frac{3x}{6} + \frac{2x}{6} \quad \text{LCD } 6$$

$$= \boxed{\frac{5x}{6}}$$

Say. Add the tops: five x over six.

Draw. Write = 5x/6 and box it on the next line.

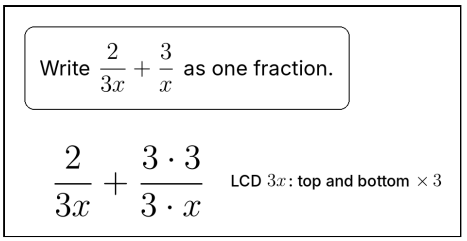
05

Write $\frac{2}{3x} + \frac{3}{x}$ as one fraction.

Say. Now two over three x, plus three over x.

Draw. Clear the board. Write “Write 2/(3x) + 3/x as one fraction.” in a box at the top.

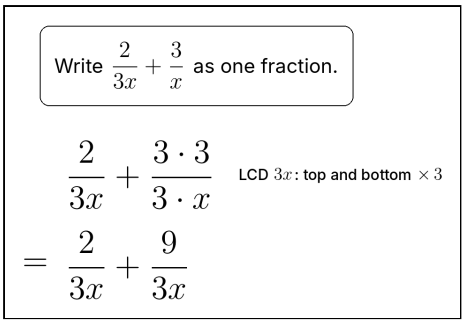
06



Say. The lowest common denominator is three x, because it already contains x. Rescale three over x: multiply the top and the bottom by three.

Draw. Write 2/(3x) + (3 · 3)/(3 · x) on the next line. Beside it, write “LCD 3x: top and bottom × 3”.

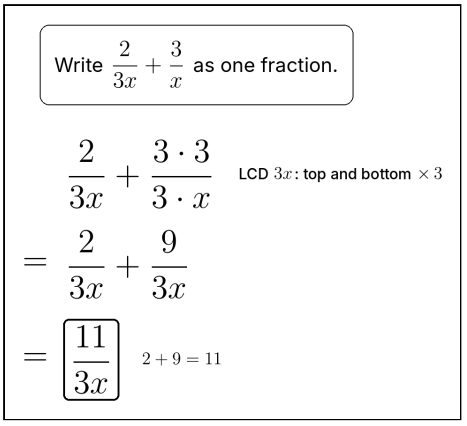
07



Say. That is nine over three x.

Draw. Write = 2/(3x) + 9/(3x) on the next line.

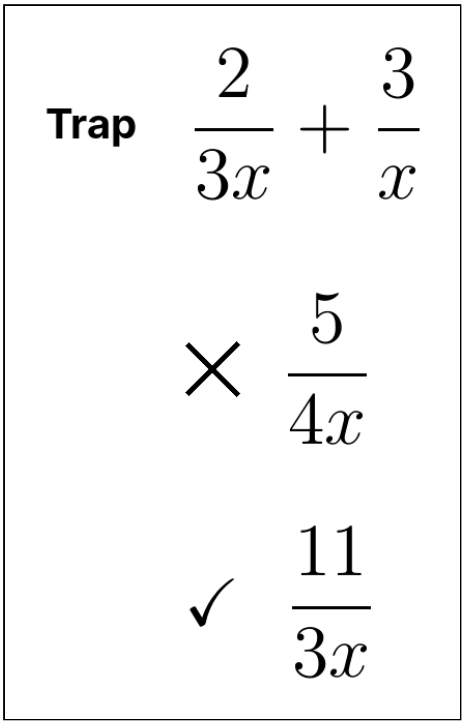
08



Say. Add the tops: eleven over three x.

Draw. Write = 11/(3x) and box it on the next line. Beside it, write “2 + 9 = 11”.

09



Say. Watch for the trap: adding the bottoms. Two over three x, plus three over x, is not five over four x. Fractions add over one denominator: eleven over three x.

Draw. Clear the board. Write “Trap” and 2/(3x) + 3/x. Below, write 5/(4x) and cross it out ×. Then write 11/(3x) with a tick ✓.

10

Trap $\dfrac{3}{x}$

$\times$ $\dfrac{3}{3x}$

✓ $\dfrac{9}{3x}$

Say. And rescale the top too. Three over x is not three over three x: the bottom was multiplied by three, so the top is too.

Draw. Clear the board. Write “Trap” and 3/x. Below, write 3/(3x) and cross it out ×. Then write 9/(3x) with a tick ✓.

11

Your turn

One denominator:
rescale every top, then add

Say. Now it is your turn. Find one denominator, rescale every top, then add.

Draw. Point to today’s activity: One denominator: rescale every top, then add