Multiply Every Term: teacher script

EX08-V1 · EX08 Expand a product · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 85 seconds as a video.

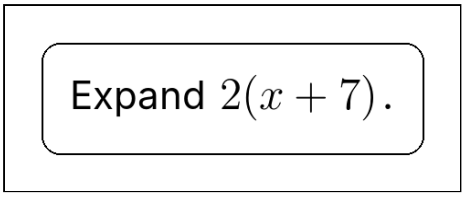
01



Say. Multiply every term. The number outside a bracket multiplies every term inside it. Its sign goes with it. And when a letter multiplies a letter, add the exponents.

Draw. Write the title “Multiply Every Term” and the steps: 1. Multiply every term inside; 2. The sign goes too; 3. Letters: add the exponents.

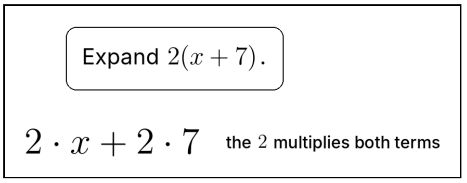
02



Say. Expand two times the bracket x + 7.

Draw. Clear the board. Write “Expand 2(x + 7).” in a box at the top.

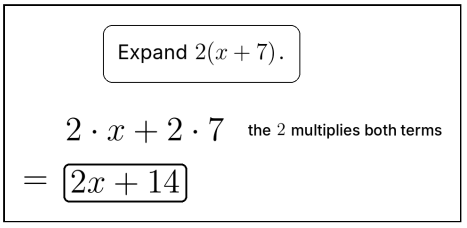
03



Say. The two multiplies both terms: two times x, and two times seven.

Draw. Write 2 · x + 2 · 7 on the next line. Beside it, write “the 2 multiplies both terms”.

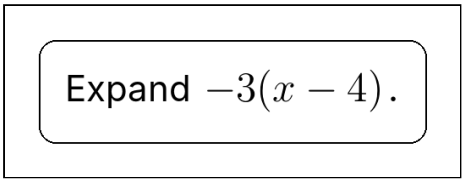
04



Say. That is 2x + 14.

Draw. Write = 2x + 14 and box it on the next line.

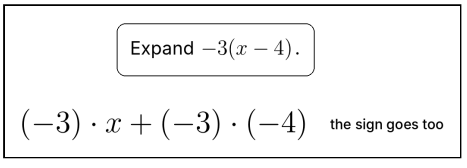
05



Say. Now expand negative three times the bracket x − 4.

Draw. Clear the board. Write “Expand −3(x − 4).” in a box at the top.

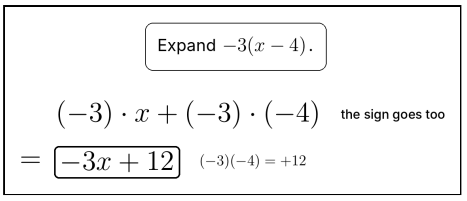
06



Say. The factor is negative three, and its sign goes with it, to both terms.

Draw. Write (−3) · x + (−3) · (−4) on the next line. Beside it, write “the sign goes too”.

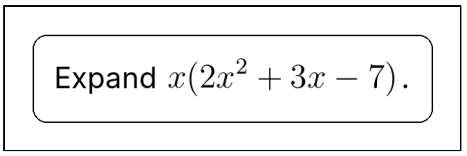
07



Say. Negative three times negative four is positive: −3x + 12.

Draw. Write = −3x + 12 and box it on the next line. Beside it, write "(−3)(−4) = +12".

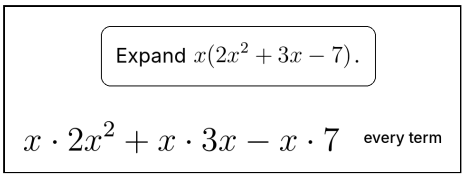
08



Say. A letter outside: x times the bracket 2x² + 3x − 7.

Draw. Clear the board. Write "Expand x(2x² + 3x − 7)." in a box at the top.

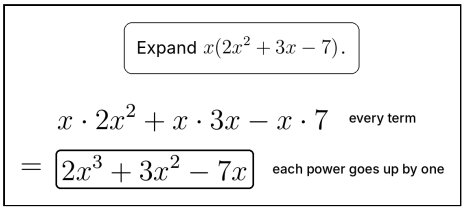
09



Say. The x multiplies every term.

Draw. Write x · 2x² + x · 3x − x · 7 on the next line. Beside it, write "every term".

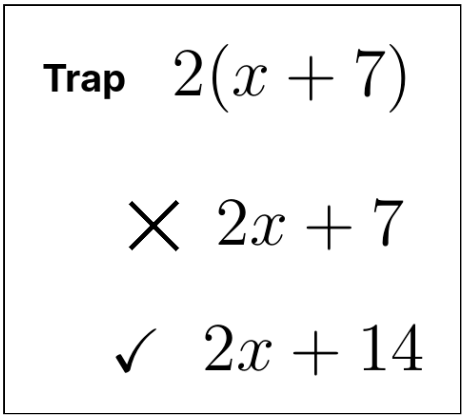
10



Say. Each power goes up by one: 2x³ + 3x² − 7x.

Draw. Write = 2x³ + 3x² − 7x and box it on the next line. Beside it, write "each power goes up by one".

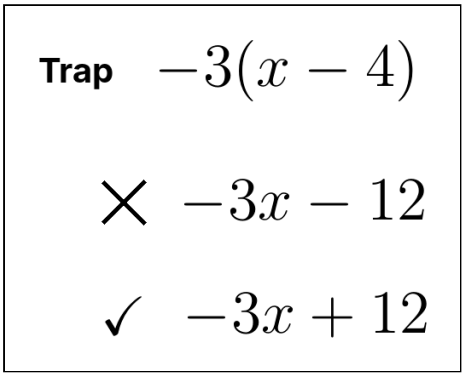
11



Say. Watch for the trap: multiplying only the first term. Two times the bracket x + 7 is not 2x + 7. The two multiplies the seven too: 2x + 14.

Draw. Clear the board. Write "Trap" and 2(x + 7). Below, write 2x + 7 and cross it out ×. Then write 2x + 14 with a tick ✓.

12



Say. And keep the signs. Negative three times the bracket x − 4 is not −3x − 12. Negative times negative is positive: −3x + 12.

Draw. Clear the board. Write "Trap" and −3(x − 4). Below, write −3x − 12 and cross it out ×. Then write −3x + 12 with a tick ✓.

13

Your turn

Multiply every term inside, and take the sign with you

Say. Now it is your turn. Multiply every term inside the bracket, and take the sign with it.

Draw. Point to today’s activity: Multiply every term inside, and take the sign with you