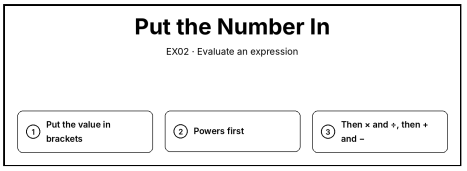
Put the Number In: teacher script

EX02-V1 · EX02 Evaluate an expression · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 75 seconds as a video.

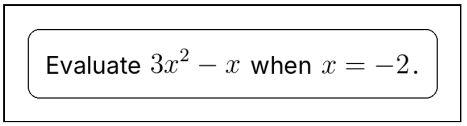
01



Say. Put the number in. Write the value in brackets, work out powers first, then multiply and divide, then add and subtract.

Draw. Write the title “Put the Number In” and the steps: 1. Put the value in brackets; 2. Powers first; 3. Then × and ÷, then + and −.

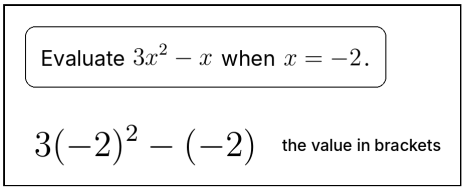
02



Say. Evaluate 3x² − x when x = −2.

Draw. Clear the board. Write “Evaluate 3x² − x when x = −2.” in a box at the top.

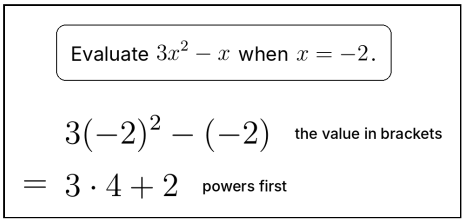
03



Say. Put negative two in, in brackets, everywhere x is.

Draw. Write 3(−2)² − (−2) on the next line. Beside it, write “the value in brackets”.

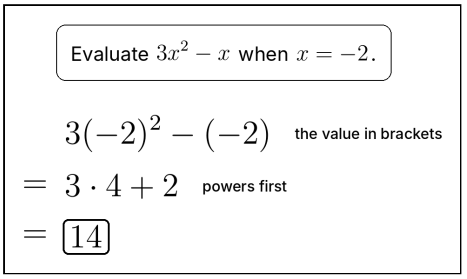
04



Say. Powers first: negative two squared is 4. And taking away negative two adds two.

Draw. Write = 3 · 4 + 2 on the next line. Beside it, write “powers first”.

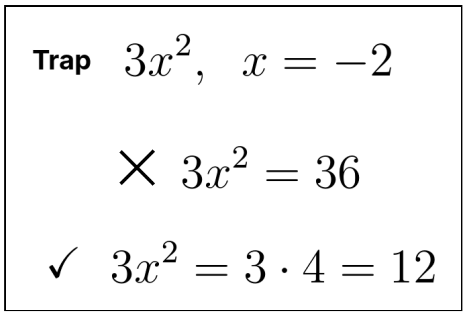
05



Say. Multiply, then add: twelve plus two is 14.

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

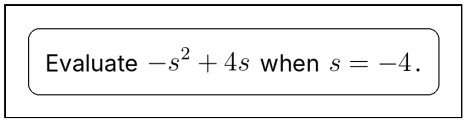
06



Say. Watch for the trap: squaring the three as well. The square is only on x: three times four is 12, not 36.

Draw. Clear the board. Write “Trap” and 3x², x = −2. Below, write 3x² = 36 and cross it out ×. Then write 3x² = 3 · 4 = 12 with a tick ✓.

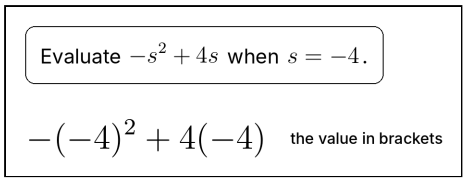
07



Say. Now evaluate −s² + 4s when s = −4.

Draw. Clear the board. Write “Evaluate −s² + 4s when s = −4.” in a box at the top.

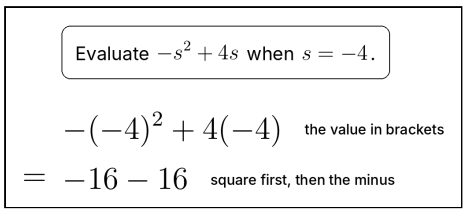
08



Say. Put negative four in, in brackets.

Draw. Write −(−4)² + 4(−4) on the next line. Beside it, write “the value in brackets”.

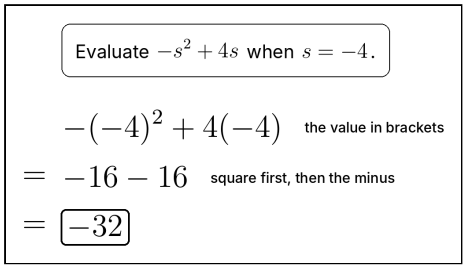
09



Say. Square first: negative four squared is 16, and the minus in front makes it −16. Four times negative four is −16 too.

Draw. Write = −16 − 16 on the next line. Beside it, write “square first, then the minus”.

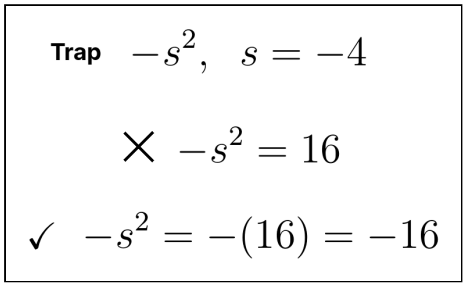
10



Say. Together, −32.

Draw. Write = −32 and box it on the next line.

11



Say. Watch for the trap: squaring the minus sign. −s² means the negative of s², so it is −16, never 16.

Draw. Clear the board. Write “Trap” and −s², s = −4. Below, write −s² = 16 and cross it out ×. Then write −s² = −(16) = −16 with a tick ✓.

12

Your turn

Brackets round the value, powers first

Say. Now it is your turn. Put the value in brackets, and work out powers first.

Draw. Point to today’s activity: Brackets round the value, powers first