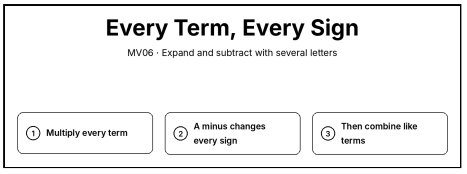
# Every Term, Every Sign: teacher script

MV06-V1 · MV06 Expand and subtract with several letters · teachers only. Without a screen, read each Say line and draw each Draw step on the board. About 73 seconds as a video.

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**01**

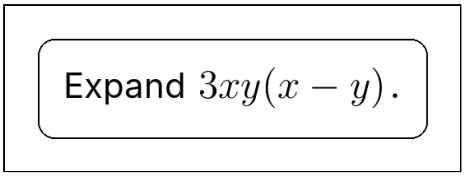



**Say.** Every term, every sign. Multiply every term in the bracket. A minus in front changes every sign. Then combine like terms.

**Draw.** Write the title “Every Term, Every Sign” and the steps: 1. Multiply every term; 2. A minus changes every sign; 3. Then combine like terms.

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**02**

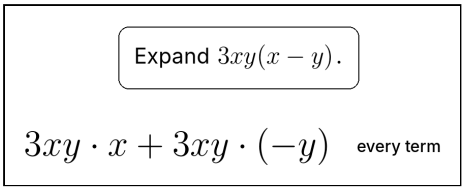



**Say.** Expand 3xy(x − y).

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

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**03**

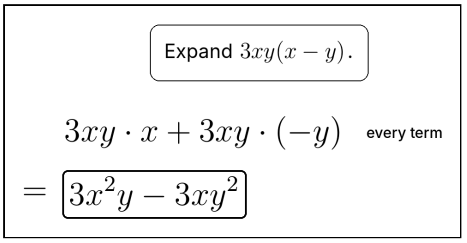



**Say.** Multiply each term in the bracket by 3xy.

**Draw.** Write 3xy · x + 3xy · (−y) on the next line. Beside it, write “every term”.

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**04**

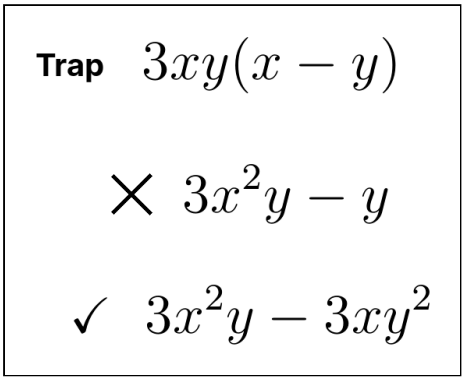



**Say.** That gives 3x²y − 3xy². These are not like terms, so that is the answer.

**Draw.** Write = 3x²y − 3xy² and box it on the next line.

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**05**

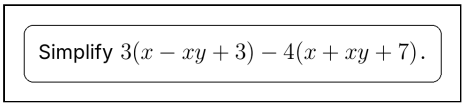



**Say.** Watch for the trap: multiplying only the first term. 3xy multiplies every term.

**Draw.** Clear the board. Write “Trap” and 3xy(x − y). Below, write 3x²y − y and cross it out ×. Then write 3x²y − 3xy² with a tick ✓.

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**06**

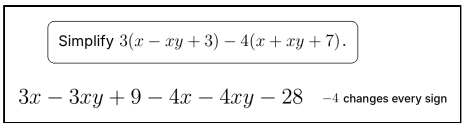



**Say.** Now simplify 3(x − xy + 3) − 4(x + xy + 7).

**Draw.** Clear the board. Write “Simplify 3(x − xy + 3) − 4(x + xy + 7).” in a box at the top.

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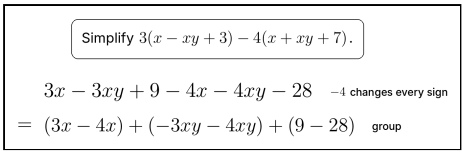
**07**




**Say.** Expand each bracket. Negative four times every term: −4x, −4xy and −28.

**Draw.** Write 3x − 3xy + 9 − 4x − 4xy − 28 on the next line. Beside it, write "−4 changes every sign".

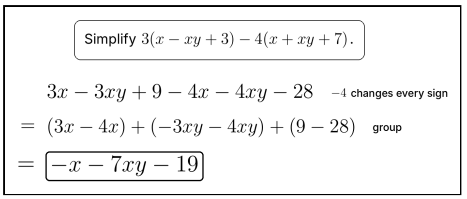
**08**




**Say.** Group the like terms.

**Draw.** Write = (3x − 4x) + (−3xy − 4xy) + (9 − 28) on the next line. Beside it, write "group".

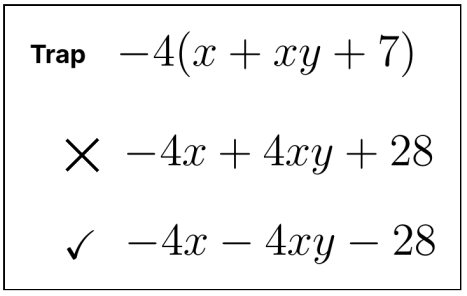
**09**




**Say.** So it is −x − 7xy − 19.

**Draw.** Write = −x − 7xy − 19 and box it on the next line.

**10**




**Say.** Watch for the trap: sign slips with a negative. Negative four times every term is negative.

**Draw.** Clear the board. Write "Trap" and −4(x + xy + 7). Below, write −4x + 4xy + 28 and cross it out ×. Then write −4x − 4xy − 28 with a tick ✓.

**11**




**Say.** Now it is your turn. Every term, every sign.

**Draw.** Point to today's activity: Every term, every sign