Linear equations: collect like terms

Year 7, upper volume • text pp. 59–60 • foundation lesson 30 • 1/2

Name: _____ Class: _____ Date: _____

Worked example 1

Solve 3x + 2x = 25. Explain what is added when like terms are collected.

$$3x + 2x = 25$$

Guided attempt 2

Solve 7x − 3x + 6 = 22. Complete the three lines on paper before checking.

$$7x - 3x + 6 = 22$$

1. 7x − 3x = _____ x, so _____ x + 6 = 22.
2. Subtract 6 from both sides: _____ x = _____.
3. Divide both sides by _____: x = _____. Then substitute.

Prerequisite 3

Complete 3x − 5x = _____ x. Write only the coefficient.

$$3x - 5x = \underline{\quad\quad}x$$

Prerequisite 4

For −4x = 20, what should both sides be divided by to make the coefficient of x equal to 1? State the solution and check it.

$$-4x = 20$$

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Year 7, upper volume • text pp. 59–60 • foundation lesson 30 • 2/2

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Independent practice 5

Solve 4x + 3x = 42.

$$4x + 3x = 42$$

Independent practice 6

Solve 9x − 5x − 3 = 13.

$$9x - 5x - 3 = 13$$

Independent practice 7

Solve 2x − 7x = 30.

$$2x - 7x = 30$$

Independent practice 8

Solve −6x + x + 8 = −12.

$$-6x + x + 8 = -12$$

Exit question 9

Solve −3x − 2x = 15. Include a substitution check.

$$-3x - 2x = 15$$

Exit question 10

For 4x − 7x = 18, a learner writes 3x = 18 and x = 6. Identify the first error, correct the solution and check it.

$$4x - 7x = 18$$