Grade 7 Expressions and Equations: Simplify and Solve

Worked example / complete source key

Simplify 5(2x - 3) + 4x and solve 3x - 7 = 11. Show checks.

Answer: Simplification: 5(2x - 3) + 4x = 10x - 15 + 4x = 14x - 15. Check with x = 2: original gives 5(4 - 3) + 8 = 5 + 8 = 13; simplified gives 28 - 15 = 13. Equation: 3x - 7 = 11. Add 7 to both sides: 3x = 18. Divide by 3: x = 6. Check: 3(6) - 7 = 18 - 7 = 11, which matches the right side.