Equivalent Expressions in Context: Matching Word Problems to Algebra

Worked example / complete source key

A school buys 4 boxes of pencils. Each box contains p pencils. The school already has 12 pencils. Write an expression for the total number of pencils.

Answer: 4p + 12

Reason: Four boxes with p pencils each gives 4p pencils from the boxes. The 12 pencils already owned are added to that total. The expression 4p + 12 keeps the two contributions separate and adds them.

Check: Test p = 5. Four boxes give 20 pencils, plus 12 already owned gives 32. The expression 4(5) + 12 = 20 + 12 = 32. The match holds.