

Solve With Care

Make your reasoning, equations and units precise.

GRADE 4 • 4.MP.6

4.MP.6 "Attend to precision."

NAME _____

DATE _____

Show your equations and checks in the spaces. A final number alone is not a complete response when a check or explanation is requested.

Be clear and check

Use an equals sign only between equal amounts. Keep units consistent and label answers. Check exact calculations with another operation; an estimate checks whether the size is reasonable.

Try it together

Four art packs each hold 13 cards. Find the total and check it.

A precise solution

Step	Work
Calculate	$4 \times 13 = 52$ cards
Check	$52 \div 4 = 13$ cards per pack

The check gives the stated number of cards in each pack. The answer includes what was counted. 52 cards in all.

1. Label the result

A library puts 16 books on each of 3 carts. Write an equation for the total. Use division to check it, and label the answer.

2. Repair an equation

Kai buys items costing \$24 and \$18 using \$60. Kai writes: $24 + 18 = 42 = 60 - 42 = 18$. Explain why the equals signs are wrong. Write correct equations for the cost and change.

3. Match the units

A cooler has 2 liters of water and 650 milliliters are added. Use 1 liter = 1,000 milliliters. Write an equation using matching units and give the total in milliliters.

4. Check a remainder

Seventy-four pencils are shared equally among 8 tables. How many whole pencils can each table get, and how many remain? Check with multiplication and addition.

5. Distinguish estimate and exact total

A reader reads 18 pages Monday, 23 Tuesday and 26 Wednesday. Estimate the total by rounding each count to the nearest ten. Then find the exact total. Label which answer is the estimate.

6. Use a check that fits

Luis has 96 tickets, trades 28 for a toy, then wins 37. Write an equation for the final count. Check by undoing the two changes in reverse order.

7. Explain the unit of your answer

A class needs 126 markers. They are sold only in full packs of 12. How many packs are needed? Show why one fewer pack would not be enough.

Teacher notes

Require precise quantities, correct equals signs and the requested units. For each item, the sample key includes the check or explanation as well as the answer. Accept equivalent valid equations and clear alternative checks. Estimates test reasonableness but do not replace exact verification.

Task 1

$3 \times 16 = 48$ books. Check: $48 / 3 = 16$ books per cart.

Task 2

$24 + 18 = 42$ and $60 - 42 = 18$. The change is \$18. The original chain says that 42 and 18 are equal, which is false.

Task 3

2 liters = 2,000 milliliters. $2,000 + 650 = 2,650$ milliliters. The two quantities must use the same unit before addition.

Task 4

9 pencils per table with 2 left over. Check: $8 \times 9 + 2 = 74$ pencils.

Task 5

Estimate: $20 + 20 + 30 = 70$ pages. Exact total: $18 + 23 + 26 = 67$ pages. The exact total is 3 pages less than the estimate.

Check each calculation and unit.

Task 6

$96 - 28 + 37 = 105$ tickets. Undo the win: $105 - 37 = 68$. Undo the trade: $68 + 28 = 96$, the starting amount.

Check each calculation and unit.

Task 7

11 packs are needed. $10 \times 12 = 120$ markers, which is short of 126. $11 \times 12 = 132$ markers, enough. The requested answer is packs, not markers.