Grade 4 Math

Multi-Step Problems and Estimation

Plan the steps. Use pieces. Check what makes sense.

Two and three steps with different operations

Letters, tape diagrams and friendly estimates

Full groups, an extra container or the leftovers

Self-checking code and mixed review

12 practice pages and 12 matching answer keys

Georgia's K-12 Mathematics Standards

4.NR.2.5

26 pages | Print at 100% | Answer keys included

TOUCHSTONE STANDARDS

© 2026 Touchstone Standards. Single classroom use.

Georgia's K-12 Mathematics Standards

4.NR.2
Using part-whole strategies, solve problems involving addition and subtraction through the hundred-thousands place, as well as multiplication and division of multi-digit whole numbers presented in real-life, mathematical situations.

4.NR.2.5
Solve multi-step problems using addition, subtraction, multiplication, and division involving whole numbers. Use mental computation and estimation strategies to justify the reasonableness of solutions.

Fundamentals
Students should be able to use the four operations with whole numbers to solve authentic, mathematical problems.

Representations
Students should represent and model problems using equations and diagrams with a variable for the unknown quantity.

Remainders
Problems should include solutions in which remainders must be interpreted.

Appendix
Specific mathematics strategies for teaching and learning are not mandated by the Georgia Department of Education or assessed on state or federally mandated tests.

Practice / key page map: all 4.NR.2.5

3 / 15 Two Steps, Two Operations
4 / 16 Estimate First
5 / 17 Letters for the Unknown
6 / 18 Draw It
7 / 19 What Does the Remainder Mean?
8 / 20 Reasonable or Not?
9 / 21 Mental Math
10 / 22 Three Steps
11 / 23 Multi-Step Stories 1
12 / 24 Multi-Step Stories 2
13 / 25 Multi-Step Code
14 / 26 Mixed Review

Teaching notes

Any correct strategy or reasonable estimate is accepted. Keys show one possible way.

Complete each letter frame. The letter n is the quantity the question asks for.

Tape diagrams are not drawn to scale. Fill the two amount boxes; the right label names the whole.

Round first, then compare the exact answer with the estimate. For spare-piece questions, estimate the full-group count and check the leftover with multiplication.

p7 uses full bundles and stores extras. p12 uses an extra tote or the spare connectors.

Answers without commas are correct. Check that the remainder is smaller than its divisor.

Follow Touchstone Standards on TPT for new Grade 4 resources. After use, an honest review helps us improve.

Print at 100%. This bar must measure 2 inches.



© 2026 Touchstone Standards. Single classroom use.

Draw It

Name _____

Fill the frame and bar boxes. Round, estimate, solve, and check.

Strategy Spotlight	23 × 17 = 391
23 × 17 + 56	391 + 56 = 447

1 A maker has 372 blue beads and 156 white beads. It shares all the beads equally among 4 mural kits. How many beads go in each kit?

n = (372 + ☐) ÷ 4

n = ☐ beads

☐ ☐

372	156	4 × n

Show your thinking.

Estimate: _____ Reasonable? Why? _____

2 The combined amount is supplied as 528. Which label belongs on the whole bar?

☐ 4 + n ☐ 4 × n

3 The quotient is supplied as 132. Which check matches four equal kits?

☐ 4 × 132 = 528 ☐ 132 + 4 = 136

© 2026 Touchstone Standards. Single classroom use.

Answer Key: Draw It

Name _____

Fill the frame and bar boxes. Round, estimate, solve, and check.

Strategy Spotlight	23 × 17 = 391
23 × 17 + 56	391 + 56 = 447

1 A maker has 372 blue beads and 156 white beads. It shares all the beads equally among 4 mural kits. How many beads go in each kit?

n = (372 + **156**) ÷ 4

n = **132** beads

372 **156**

372	156	4 × n

Show your thinking.

372 + 156 = 528
4 × 132 + 0 = 528
(400 + 200) ÷ 4 = 150

Estimate: 150 Reasonable? Why? _____

Yes; 132 is near 150.

2 The combined amount is supplied as 528. Which label belongs on the whole bar?

- ☐ 4 + n
- ☑ 4 × n

3 The quotient is supplied as 132. Which check matches four equal kits?

- ☑ 4 × 132 = 528
- ☐ 132 + 4 = 136

© 2026 Touchstone Standards. Single classroom use.

Multi-Step Stories 2

Name _____

Round first; complete frames, solve, and check estimates.

Strategy Spotlight	267 + 218 = 485
60 full + 1 partial = 61 totes	8 × 60 + 5 = 485

1 A crew stores 318 ponchos plus 243 more in totes holding 8 each. All ponchos must be stored, including in a partly filled tote. How many totes?

☐ = 8 × (n − 1) + ☐ n = ☐

totes

Show your thinking.

Estimate: _____ Reasonable? Why? _____

2 A repair shop has 926 connectors and uses 181. Each kit takes 6. Spare connectors stay in reserve. How many connectors stay in reserve?

☐ = 6 × ☐ + n n = ☐

spare connectors

Show your thinking.

Estimate full groups: _____ Reasonable? Why? _____

© 2026 Touchstone Standards. Single classroom use.

Answer Key: Multi-Step Stories 2

Name _____

Round first; complete frames, solve, and check estimates.

Strategy Spotlight	267 + 218 = 485
60 full + 1 partial = 61 totes	8 × 60 + 5 = 485

1 A crew stores 318 ponchos plus 243 more in totes holding 8 each. All ponchos must be stored, including in a partly filled tote. How many totes?

561 = 8 × (n − 1) + **1** n = **71** totes

Show your thinking.

318 + 243 = 561
8 × 70 + 1 = 561
70 + 1 = 71
(320 + 240) ÷ 8 = 70
Use 71 totes, including one partial tote.

Estimate: 70 Reasonable? Why? Yes; 1 tote away.

2 A repair shop has 926 connectors and uses 181. Each kit takes 6. Spare connectors stay in reserve. How many connectors stay in reserve?

745 = 6 × **124** + n n = **1** spare connectors

Show your thinking.

926 − 181 = 745
6 × 124 + 1 = 745
(930 − 180) ÷ 6 = 125
Keep 1 spare connector in reserve.

Estimate full groups: 125 Reasonable? Why? 124 near 125; 1 < 6.

© 2026 Touchstone Standards. Single classroom use.