

Plan, Solve, Check

Use a plan, solve carefully, and test your answer.

GRADE 5 • TEKS 5.1

5.1 "Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: apply mathematics to problems arising in everyday life, society, and the workplace..."

NAME _____

DATE _____

A SMART PROBLEM PLAN

Start by noticing what you know and what you need to find. Choose an equation or model, solve, then check whether your answer fits the situation. Show your plan with numbers, words, or a diagram.

WORKED EXAMPLE

A movie starts at the time on the clock and lasts 25 minutes. What time does it end?



1. Read the clock: 7:05.
2. Plan: add 25 minutes.
3. $5 + 25 = 30$, so the hour stays 7.
4. Check: 7:05 to 7:30 is 25 minutes.

Answer: 7:30**PRACTICE** 4 problems

- 1** For a food drive, 48 cans fill 6 equal boxes. How many cans go in each box? Write a division equation and a multiplication check.

ANSWER _____

- 2** A game club has 96 tickets. Each prize costs 12 tickets. How many prizes can the club get? Show an equation and a check.

ANSWER _____

- 3** A crafter has 64 beads and uses 18 beads. Estimate first, then solve. How many beads remain?

ANSWER _____

- 4** A school store orders 9 packs of 14 pencils. How many pencils does it order? Write an equation and an estimate that checks your answer.

ANSWER _____

APPLY IT Show your work

- 1** Maya's reading goal is 96 pages. Use the graph. How many more pages must she read? Write an equation and explain why your answer is reasonable.

PAGES MAYA READ



ANSWER _____

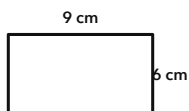
- 2** A robotics team earned \$150 at a snack table. It paid \$112 for supplies. How much money is left? Write an equation and a check.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The figure is a rectangular poster frame. A club has 28 cm of ribbon. Is that enough to go all the way around? Explain using the perimeter and tell how many centimeters are left or needed.



WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	For a food drive, 48 cans fill 6 equal boxes. How many cans go in each box? Write a division equation and a multiplication check.	8 cans; $48 \div 6 = 8$ and $8 \times 6 = 48$.
2	A game club has 96 tickets. Each prize costs 12 tickets. How many prizes can the club get? Show an equation and a check.	8 prizes; $96 \div 12 = 8$ and $8 \times 12 = 96$.
3	A crafter has 64 beads and uses 18 beads. Estimate first, then solve. How many beads remain?	About 40 beads; 46 beads remain.
4	A school store orders 9 packs of 14 pencils. How many pencils does it order? Write an equation and an estimate that checks your answer.	126 pencils; $9 \times 14 = 126$, and 9×15 is about 135.

PART 2 • APPLY IT

- 21 more pages; $18 + 22 + 16 + 19 = 75$, and $75 + 21 = 96$.** Add the four bar values to get 75 pages. Subtract 75 from the goal of 96 pages.
- \$38; $150 - 112 = 38$, and $112 + 38 = 150$.** Subtract the supply cost from the money earned. Check by adding the amount left to the supply cost.

CHALLENGE

No. The perimeter is 30 cm, so the club needs 2 cm more ribbon.

Accept equivalent equations and reasonable estimates. For the challenge, accept any clear explanation that shows a perimeter of 30 cm and a shortage of 2 cm.