

Tool Choice Quest

Choose a math tool that makes each problem clear.

GRADE 4 • 4.MP.5

4.MP.5 "Use appropriate tools strategically."

NAME _____

DATE _____

PICK TOOLS WISELY

Before you solve, think about what will make the math clear and accurate. You might use mental math for familiar facts, a number line for time or fractions, a table for equal groups, or written work for larger totals. Check with a different method or ask whether your answer makes sense.

WORKED EXAMPLE

A bead shop puts 17 beads on each of 4 bracelets. How many beads does the shop use?

1. Choose written multiplication because the group size is not a quick fact.
2. Break 17 into 10 and 7.
3. Multiply: $10 \times 4 = 40$ and $7 \times 4 = 28$.
4. Add $40 + 28 = 68$. Check: $68 \div 4 = 17$.

Answer: 68 beads

PRACTICE 6 problems

- 1** The gaming club sets 9 tables with 6 seats at each table. Choose a tool, solve, check, and write why your tool fits.

ANSWER _____

- 2** A book drive collects 146 books on Monday and 189 books on Tuesday. Choose a tool, solve, check, and write why your tool fits.

ANSWER _____

- 3** A teacher shares 72 trading cards equally among 8 players. Choose a tool, solve, check, and write why your tool fits.

ANSWER _____

- 4** A movie starts at 2:35 and ends at 3:20. Choose a tool, solve, check, and write why your tool fits.

ANSWER _____

- 5** Nia rides her scooter $\frac{3}{8}$ mile, then rides $\frac{2}{8}$ mile more. Choose a tool, solve, check, and write why your tool fits.

ANSWER _____

- 6** At the school store, Luis pays \$50 for a game that costs \$37. Choose a tool, solve, check, and write why your tool fits.

ANSWER _____

APPLY IT Show your work

- 1** The library puts 24 new graphic novels on each of 6 shelves. Students borrow 39 of the new novels. How many new graphic novels are still on the shelves? Choose useful tools, solve, check, and explain why your tools fit.

WORK SPACE

ANSWER _____

- 2** A coding club puts 144 stickers equally into 6 prize bags. Then the club adds 3 more stickers to each bag. How many stickers are in each prize bag? Choose useful tools, solve, check, and explain why your tools fit.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

The school store has 18 pencils in each of 5 packs. It gives 29 pencils to a classroom. How many pencils remain? Choose tools, solve, check, and explain why each tool helps.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	The gaming club sets 9 tables with 6 seats at each table. Choose a tool, solve, check, and write why your tool fits.	Possible tool: mental multiplication, because 9×6 is a known fact. 54 seats.
2	A book drive collects 146 books on Monday and 189 books on Tuesday. Choose a tool, solve, check, and write why your tool fits.	Possible tool: written addition, because the totals are larger. 335 books.
3	A teacher shares 72 trading cards equally among 8 players. Choose a tool, solve, check, and write why your tool fits.	Possible tool: a multiplication fact, because $8 \times 9 = 72$. 9 cards for each player.
4	A movie starts at 2:35 and ends at 3:20. Choose a tool, solve, check, and write why your tool fits.	Possible tool: a number line, because it shows elapsed time. 45 minutes.
5	Nia rides her scooter $\frac{3}{8}$ mile, then rides $\frac{2}{8}$ mile more. Choose a tool, solve, check, and write why your tool fits.	Possible tool: a fraction number line, because both fractions have the same denominator. $\frac{5}{8}$ mile.
6	At the school store, Luis pays \$50 for a game that costs \$37. Choose a tool, solve, check, and write why your tool fits.	Possible tool: count up from 37 to 50. The change is \$13, and $37 + 13 = 50$.

PART 2 • APPLY IT

- 105 graphic novels** Multiply $24 \times 6 = 144$ to find the number placed on shelves. Then subtract 39: $144 - 39 = 105$; adding 39 back checks the answer.
- 27 stickers in each prize bag** Divide 144 by 6 to get 24 stickers per bag, then add 3 to get 27. Check with $27 - 3 = 24$ and $24 \times 6 = 144$.

CHALLENGE

Use multiplication to find $18 \times 5 = 90$, then use written subtraction: $90 - 29 = 61$. Multiplication finds the pencils in equal packs, subtraction finds what remains, and $61 + 29 = 90$ checks the result.

Accept different tools when the student's method is accurate, efficient, and explained. Accept equivalent fraction answers for $\frac{5}{8}$ and any clear check that confirms the result.