

# Operation Quest

*Simplify expressions in the correct order.*

**GRADE 5 • 5.CE.4.a.iv**

**5.CE.4.a.iv** "Use order of operations to simplify numerical expressions with whole numbers, limited to addition, subtraction, multiplication, and division in which:\* expressions should not include braces, brackets, or fraction bars."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## FOLLOW THE ORDER

First, do the work inside parentheses. Then multiply and divide from left to right, and finally add and subtract from left to right.

## WORKED EXAMPLE

$$18 + 4 \times 7 - 6$$

$$1. 4 \times 7 = 28$$

$$2. 18 + 28 = 46$$

$$3. 46 - 6 = 40$$

**Answer: 40**

## PRACTICE 6 problems

**1**  $9 + 3 \times 5$

ANSWER \_\_\_\_\_

**2**  $(16 - 8) \times 2$

ANSWER \_\_\_\_\_

**3**  $36 \div 9 + 11$

ANSWER \_\_\_\_\_

**4**  $28 - 12 \div 3$

ANSWER \_\_\_\_\_

**5**  $5 \times (14 + 1)$

ANSWER \_\_\_\_\_

**6**  $45 \div (12 - 3)$

ANSWER \_\_\_\_\_

## APPLY IT Show your work

- 1** In a gaming tournament, a player wins 8 rounds worth 13 points each. A 17-point penalty is taken away. What is the player's final score?

WORK SPACE

ANSWER \_\_\_\_\_

- 2** At a school game festival, 9 teams earn 12 tickets each. The organizers use 23 tickets for a raffle and divide the remaining tickets equally among 5 prize boxes. How many tickets go in each prize box?

WORK SPACE

ANSWER \_\_\_\_\_

## CHALLENGE One step up

### CHALLENGE

Simplify:  $81 \div 9 \times (15 - 11) + 2$

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**PART 1 • PRACTICE**

| # | PROBLEM             | ANSWER    |
|---|---------------------|-----------|
| 1 | $9 + 3 \times 5$    | <b>24</b> |
| 2 | $(16 - 8) \times 2$ | <b>16</b> |
| 3 | $36 \div 9 + 11$    | <b>15</b> |
| 4 | $28 - 12 \div 3$    | <b>24</b> |
| 5 | $5 \times (14 + 1)$ | <b>75</b> |
| 6 | $45 \div (12 - 3)$  | <b>5</b>  |

**PART 2 • APPLY IT**

1. **87 points** Multiply 8 by 13 to get 104. Then subtract 17 to get 87 points.

2. **17 tickets** Multiply 9 by 12, subtract 23, then divide by 5. The calculation is  $(9 \times 12 - 23) \div 5 = 17$ .

**CHALLENGE****38**

Accept correct numerical answers with or without written intermediate steps. For word problems, accept answers with equivalent unit wording, such as 87 points or 17 tickets per prize box.