

4

New Jersey

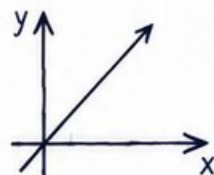
NJSLA

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs

$$y = mx + b$$



$$\frac{2x}{3} + \frac{x}{6} = 2$$



$$V = \frac{1}{3} \pi r^2 h$$



4 PRINTED TESTS



2 ONLINE TESTS



USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS

FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



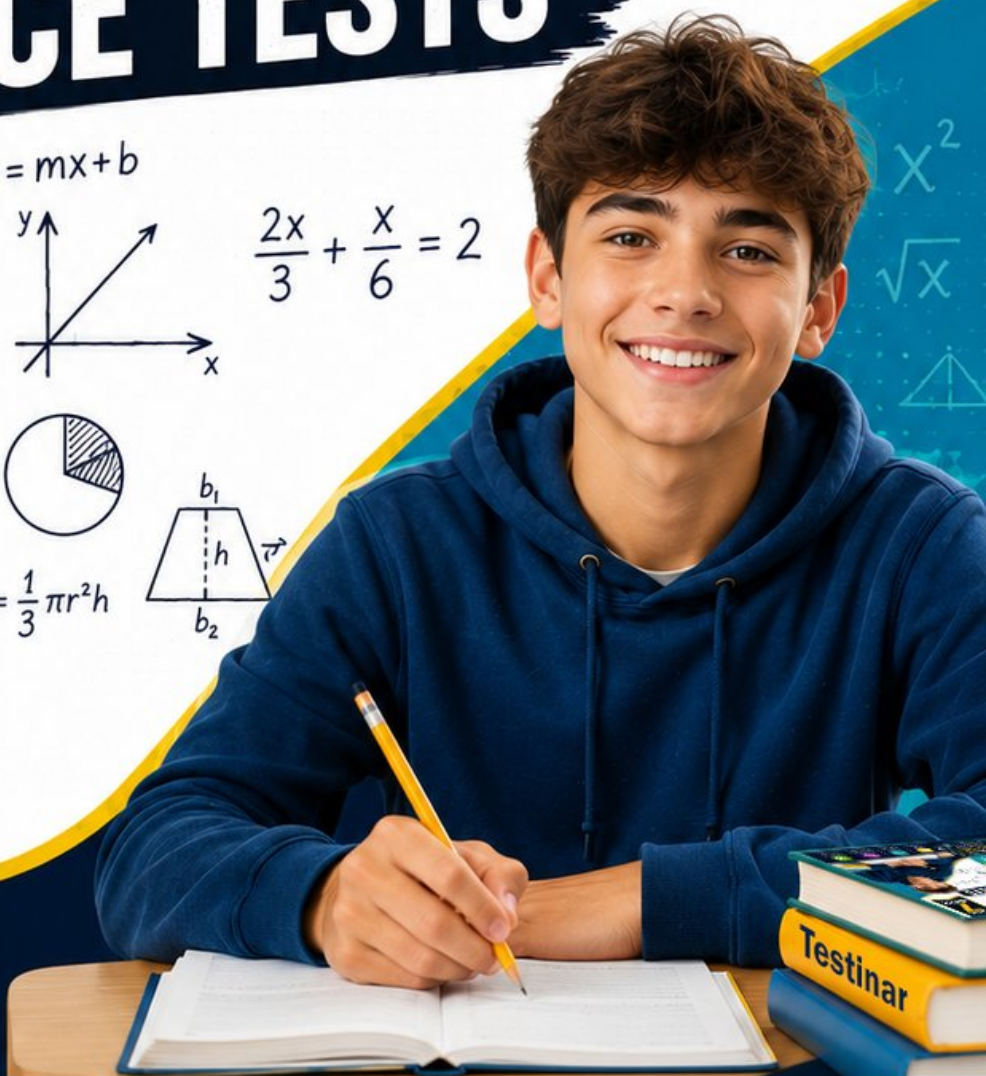
Strengthen
Math Skills



Detailed Answers
& Explanations



Improve Test
Performance



4 New Jersey NJSLA Grade 7 Math Practice Tests

Four New Jersey Practice Tests with Review and Solution Support



Four complete 40-question Grade 7 NJSLA practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, New Jersey Grade 7 Problem Solver!

Four focused rounds for sharper NJSLA math thinking

This book gives you four full Grade 7 NJSLA math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your New Jersey Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A four-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

New Jersey review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Four NJSLA tests, 160 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 3–4	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



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& answers

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1) Which expression represents “twice the difference of y and 5”?

☐ A. $2y - 5$

☐ C. $5 - 2y$

☐ B. $2(y - 5)$

☐ D. $2y + 5$

2) A cylinder has a radius of 2.5 m and a volume of 78.5 m^3 . What is the height? Use $\pi \approx 3.14$.

☐ A. 2 m

☐ C. 6 m

☐ B. 4 m

☐ D. 8 m

3) Two chemical batches' purity levels (percentages):

Batch	Q1	Q3	Median
Batch Alpha	88	94	91
Batch Beta	90	93	91.5

For consistent, high-purity production, which batch is superior?

☐ A. Batch Alpha (wider IQR shows diversity in purity)☐ C. Both are identical☐ B. Batch Beta (narrower IQR = tighter quality, higher Q1)☐ D. Cannot determine without knowing ranges

4) What is the opposite of the opposite of -3 ?



- 5) A histogram shows the weights (in pounds) of 50 dogs. The intervals are 10–20 lbs, 20–30 lbs, 30–40 lbs, and 40–50 lbs, with frequencies 8, 15, 20, and 7. Which interval contains the mode?

☐ A. 10–20 lbs ☐ C. 30–40 lbs
☐ B. 20–30 lbs ☐ D. 40–50 lbs

- 6) A die is rolled and a letter from the set {A, B, C, D, E} is drawn. How many outcomes are in the sample space?

☐ A. 11 ☐ C. 25
☐ B. 18 ☐ D. 30

- 7) What is the error in the following reasoning? A student says: “The probability of getting heads on a coin flip is $\frac{1}{2}$. I just flipped heads, so the next flip is more likely to be tails.”

☐ A. Coin flips are mutually exclusive, not independent ☐ C. The probability should be $\frac{1}{4}$ after getting heads once
☐ B. Each coin flip is independent; prior outcomes do not affect future ones ☐ D. Tails becomes impossible after getting heads

- 8) Calculate $-9 \times \frac{4}{3}$.



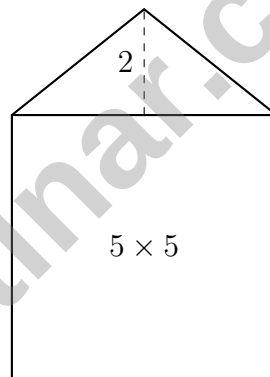
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9) Two box plots compare monthly rainfall (in inches) for Region A and Region B. Region A: IQR (Interquartile Range) = 3 inches; Region B: IQR = 8 inches. What does this comparison reveal?

- ☐ A. Region A has more variable rainfall ☐ C. Both regions have identical rainfall patterns
☐ B. Region B has a wider middle 50% of data (more variability in the middle) ☐ D. Region A receives more total rain annually

10) A weather report analyzed 365 days of data. It rained on 78 days. What is the experimental probability that it will rain on any given day, based on this data?

- ☐ A. 0.17 ☐ C. 0.31
☐ B. 0.21 ☐ D. 0.78



11)

A decorative tile is a square (5 cm $\times$ 5 cm) with an isosceles triangle attached to the top (base 5 cm, height 2 cm). What is the total area?

- ☐ A. 10 cm² ☐ C. 30 cm²
☐ B. 25 cm² ☐ D. 35 cm²



1) Solve: $-3x + 10 = 1$

☐ A. $x = -3$

☐ B. $x = 1$

☐ C. $x = 3$

☐ D. $x = 9$

2) What is 0.4×0.5 ?

☐ A. 0.2

☐ B. 0.9

☐ C. 1.8

☐ D. 2

3) Which of the following equals $\sqrt{196}$?

☐ A. 12

☐ B. 13

☐ C. 14

☐ D. 15

4) Simplify: $2(5x - 2) - (3x - 4)$.

☐ A. $10x - 4 - 3x - 4 = 7x - 8$

☐ B. $10x - 4 - 3x + 4 = 7x$

☐ C. $7x + 2$

☐ D. $13x - 8$

5) A recipe for lemonade uses 2 cups lemon juice and 8 cups water. Which statement is true?

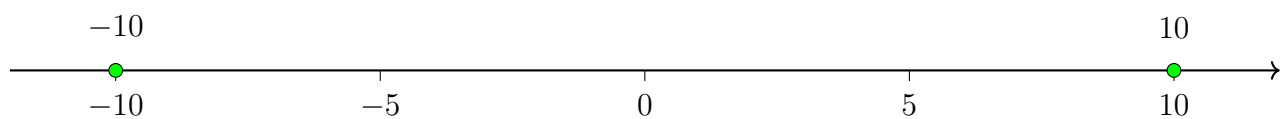
☐ A. The ratio of lemon to water is 1 : 3

☐ B. The ratio of lemon to water is 1 : 4

☐ C. For every 3 cups of lemon, there are 12 cups of water

☐ D. The ratio of water to lemon is 3 : 1

6) On a number line, which point represents a number whose absolute value is 10?



☐ A. Only 10

☐ B. Only -10

☐ C. Both 10 and -10

☐ D. Only 0



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7) To simulate the probability of guessing a true/false question correctly 3 times in a row, which tool best models this compound event?

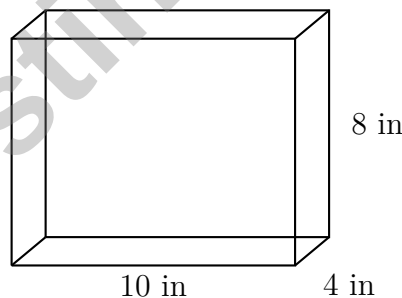
- ☐ A. Rolling a six-sided die once
- ☐ B. Flipping a coin 3 times
- ☐ C. Spinning a spinner with 3 equal sections once
- ☐ D. Drawing a card from a deck of 52 once

8) Simplify: $8x + 5y - 3x - 2y + x$

- ☐ A. $6x + 3y$
- ☐ B. $12x + 3y$
- ☐ C. $4x + 3y$
- ☐ D. $8x + 5y$

9) A student factors $-8m - 12$ and gets $-4(2m + 3)$. Is this correct?

- ☐ A. Yes; $-4(2m + 3) = -8m - 12$
- ☐ B. No; the GCF should be -2
- ☐ C. No; the correct factorization is $4(2m + 3)$
- ☐ D. No; the correct factorization is $-4(2m - 3)$



10)

The rectangular prism shown has dimensions $10\text{ in} \times 8\text{ in} \times 4\text{ in}$. Calculate the surface area.

- ☐ A. 320 in^2
- ☐ B. 304 in^2
- ☐ C. 240 in^2
- ☐ D. 160 in^2



1) Solve: $\frac{x}{2} + 3 > 9$

☐ A. $x > 12$

☐ C. $x > 6$

☐ B. $x < 12$

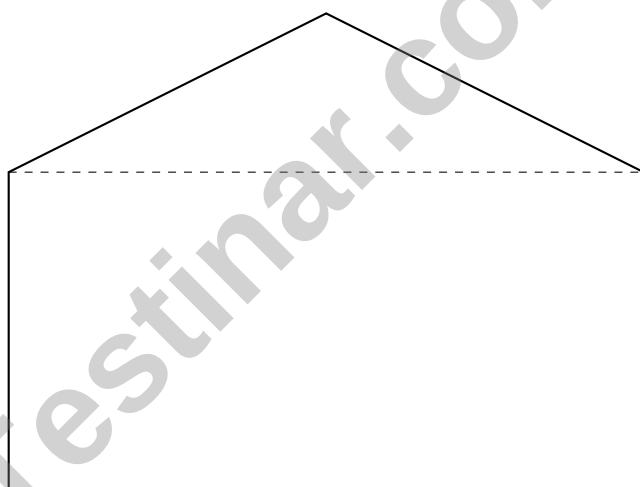
☐ D. $x > 3$

2) Two dot plots show the number of iced beverages sold daily at two coffee shops. Shop X: 40, 42, 42, 44, 44, 44, 46, 48 beverages. Shop Y: 20, 30, 40, 50, 60, 70 beverages. Which shop's daily sales are easier for inventory planning?

☐ A. Shop X (clusters tightly; easier to predict daily demand)

☐ C. Both shops are identical for planning

☐ B. Shop Y (wider range allows flexibility)

☐ D. Shop Y (higher maximum sales)


3)

A pentagon-shaped region can be decomposed into a trapezoid (parallel sides 12 units and 12 units, height 6 units) and a triangle (base 6 units, height 3 units). What is the total area?

☐ A. 50 sq units

☐ C. 72 sq units

☐ B. 63 sq units

☐ D. 81 sq units



- 4) A triangular prism has a volume of 240 cm^3 and a depth of 10 cm. What is the area of the triangular base?
- ☐ A. 12 cm^2 ☐ C. 36 cm^2
☐ B. 24 cm^2 ☐ D. 48 cm^2
- 5) A rectangle is inscribed in a circle. One side is 8 cm and an adjacent side is 6 cm. Is there a unique rectangle that satisfies these conditions?
- ☐ A. Yes, exactly one ☐ C. No, but there are exactly two
☐ B. No, infinitely many ☐ D. No rectangle fits these conditions
- 6) A circle has a radius of 5 inches. What is its diameter?
- ☐ A. 2.5 inches ☐ C. 10 inches
☐ B. 5 inches ☐ D. 15 inches
- 7) Identify which pair are NOT like terms.
- ☐ A. $6a^2$ and $9a^2$ ☐ C. $-3y$ and $4y$
☐ B. $5x$ and $5x^2$ ☐ D. $2mn$ and mn
- 8) Factor: $-4x - 12$
- ☐ A. $-4(x + 3)$ ☐ C. $-4(x - 3)$
☐ B. $4(x + 3)$ ☐ D. $-(4x + 12)$



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New Jersey NJSLA Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 student:**

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next New Jersey NJSLA practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.EE.1-7.EE.2) Difference of y and 5 is $(y - 5)$. Twice this is $2(y - 5)$.
- 2) **Choice B is correct.** (7.G.4-7.G.6) $78.5 = 3.14 \times 6.25 \times h \Rightarrow 78.5 = 19.625h \Rightarrow h = 4$ m.
- 3) **Choice B is correct.** (7.SP.1-7.SP.4) Batch Alpha: IQR = $94 - 88 = 6$. Batch Beta: IQR = $93 - 90 = 3$. Batch Beta's smaller IQR (tighter middle 50%) and higher Q1 (90 vs. 88) indicate more consistently high-purity output.
- 4) **The correct answer is -3 .** (7.NS.1-7.NS.3) The opposite of -3 is 3, and the opposite of 3 is -3 .
- 5) **Choice C is correct.** (7.SP.1-7.SP.4) The mode is in the interval with the highest frequency. The 30–40 lbs interval has a frequency of 20, which is the highest among all intervals.
- 6) **Choice D is correct.** (7.SP.5-7.SP.8) Die outcomes: 6; letter outcomes: 5. Total: $6 \times 5 = 30$ outcomes.
- 7) **Choice B is correct.** (7.SP.5-7.SP.8) This is the “gambler’s fallacy.” Each coin flip is independent, so the probability of tails on the next flip remains $\frac{1}{2}$ regardless of previous outcomes.
- 8) **The correct answer is -12 .** (7.NS.2) $-9 \times \frac{4}{3} = \frac{-36}{3} = -12$.
- 9) **Choice B is correct.** (7.SP.3) The IQR (from Q1 to Q3) represents the spread of the middle 50% of data. A larger IQR (8 vs. 3) indicates more variability in the central portion of the distribution.
- 10) **Choice B is correct.** (7.SP.6) Relative frequency of rainy days: $\frac{78}{365} \approx 0.214 \approx 0.21$. This experimental probability predicts future rain likelihood.
- 11) **Choice C is correct.** (7.G.4-7.G.6) Square: $5 \times 5 = 25 \text{ cm}^2$. Triangle: $\frac{1}{2} \times 5 \times 2 = 5 \text{ cm}^2$. Total: $25 + 5 = 30 \text{ cm}^2$.
- 12) **The correct answer is 100.** (7.NS.1-7.NS.3) Perimeter $= 4s = 40$, so $s = 10$ cm. Area $= s^2 = 10^2 = 100 \text{ cm}^2$.
- 13) **Choice D is correct.** (7.SP.1-7.SP.4) All leaves appear exactly once, so no value repeats. There is no mode.
- 14) **Choice A is correct.** (7.G.4-7.G.6) Rectangular: $V = 4 \times 3 \times 10 = 120 \text{ cm}^3$. Triangular: $V = 6 \times 10 = 60 \text{ cm}^3$. The rectangular prism is larger.
- 15) **Choice C is correct.** (7.G.1-7.G.5) In an isosceles triangle, the two base angles are equal. If each is 20° , the vertex angle is $180 - 20 - 20 = 140^\circ$ (obtuse, as required).
- 16) **Choice A is correct.** (7.G.4-7.G.6) $r = \frac{d}{2} = \frac{13.4}{2} = 6.7$ mm.
- 17) **Choice B is correct.** (7.G.1-7.G.5) SSA is the ambiguous case. Depending on the side lengths and angle, there may be no valid triangle (Triangle Inequality violated), exactly one triangle (right angle or obtuse), or two distinct triangles (acute angle with proper side ratio).
- 18) **The correct answer is B,C.** (7.RP.1-7.RP.3) Option B: cost = $1.50 \times$ pounds (proportional, of form $y = kx$). Option C: distance = speed $\times$ time (proportional). Option A is a general trend but not a strict proportional relationship. Option D: height does not scale proportionally with age (growth rates vary).
- 19) **Choice B is correct.** (7.SP.5-7.SP.8) Probability is always between 0 and 1 (inclusive). Only 0.35 fits.
- 20) **Choice C is correct.** (7.SP.1-7.SP.4) $\frac{27}{90} = \frac{x}{2700}$. Reduce to $\frac{3}{10} \Rightarrow x = 810$.
- 21) **Choice D is correct.** (7.NS.1-7.NS.3) $-2 - (-8) = -2 + 8 = 6$. The opposite of -8 is 8, and $-2 + 8 = 6$.
- 22) **Choice C is correct.** (7.SP.1-7.SP.4) 31% of 400 = $0.31 \times 400 = 124$ pies.
- 23) **Choice D is correct.** (7.RP.1-7.RP.3) Scale factor: $20 \div 2 = 10$ (reduction by factor of 10). Height: $30 \div 10 = 3$ inches.
- 24) **Choice C is correct.** (7.RP.3) 50% is half; half of 200 is 100.
- 25) **Choice D is correct.** (7.RP.1-7.RP.3) Set up proportion: $\frac{2}{3} = \frac{8}{y}$. Cross multiply: $2y = 24$, so $y = 12$.
- 26) **Choice D is correct.** (7.RP.1-7.RP.3) The diagram shows 6 equal parts totaling 18 miles. The equation is $6m = 18$, giving $m = 3$ miles per part. This represents a proportional relationship where each part measures the same distance.
- 27) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate from first pair: $\frac{2.40}{6} = 0.40$ \$ per egg. For cost \$1.20: number of eggs = $\frac{1.20}{0.40} = 3$ eggs.
- 28) **Choice D is correct.** (7.RP.1-7.RP.3) From the unit-rate point (1, 0.5), at $x = 6$, $y = 6 \times 0.5 = 3$ pages.
- 29) **Choice C is correct.** (7.RP.3) Set up the proportion $\frac{x}{100} = \frac{16}{80}$. Cross-multiply: $x = \frac{16 \times 100}{80} = 20$.



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Hi, Thoughtful Reader!

◇ A strong Grade 7 test taker is also a strong reader. You practiced turning words, tables, graphs, and diagrams into math decisions. ◇

★ **Remember this:** That skill grows each time you slow down enough to ask what the problem is really telling you and what it is really asking for. This version gave you 4 opportunities to rehearse test-day habits. ★

Reader-to-Solver Skills

- **Circle the Ask:** Make the target visible.
- **Sort Information:** Separate useful facts from extra words.
- **Match Units:** Keep quantities connected.
- **Answer Fully:** Include the value and what it means.

Grade 7 test-day tip: After solving, reread only the final question. Make sure your answer matches it exactly.

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Reading-and-Math Helper

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **4** full-length Math practice tests and **2** online tests to help Grade **7** students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

Perfect for classroom use, homework, test preparation, and extra practice at home.



THIS BOOK INCLUDES:

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2 Online Practice Tests

 Detailed Answers & Explanations



MORE PRACTICE. GREATER RESULTS.

Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

WHAT YOU'LL GAIN



Build Confidence

Practice regularly to feel prepared and test-ready.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



Improve Understanding

Learn with clear explanations and step-by-step solutions.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Boost Performance

Apply your knowledge and achieve your best score!

TOPICS COVERED

- ✓ Ratios & Proportions
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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