

6

NEBRASKA

NSCAS Growth

GRADE

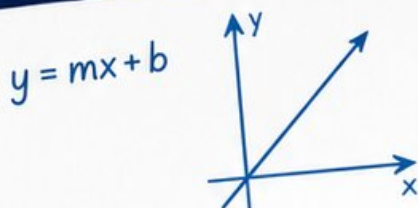
7

MATH

PRACTICE TESTS



Standards Aligned
Problem Solving For
Comprehensive
Assessment Programs



$$2(x - 3) = 4x + 6$$

6 PRINTED TESTS



2 ONLINE TESTS



USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



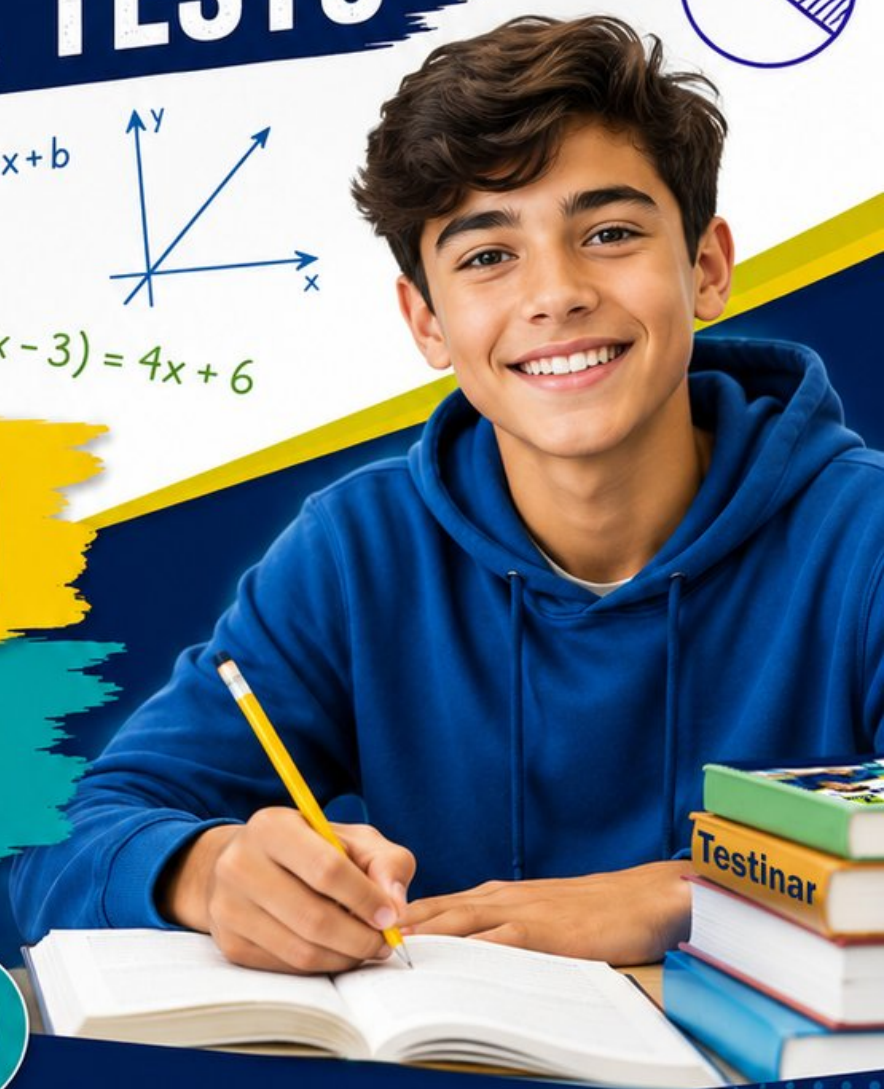
Strengthen
Math Skills



Detailed Answers
& Explanations

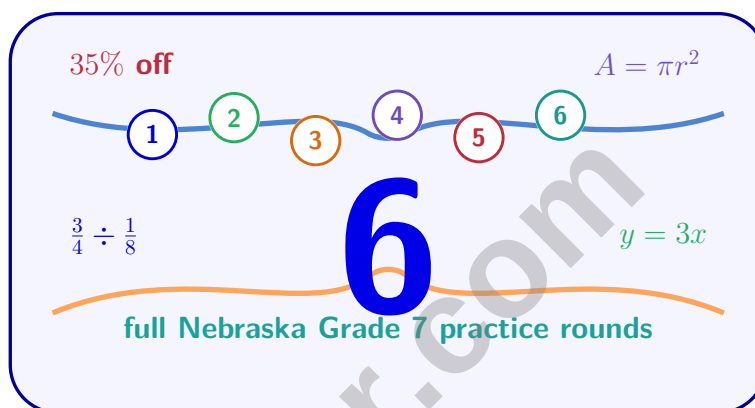


Improve Test
Performance



6 Nebraska NSCAS Growth Grade 7 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Six complete 40-question Grade 7 NSCAS Growth 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, Nebraska Grade 7 Problem Solver!

Six focused rounds for sharper NSCAS Growth math thinking

This book gives you six full Grade 7 NSCAS Growth 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 Nebraska 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 six-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.

Nebraska 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?

Six NSCAS Growth tests, 240 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, 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

Table of Contents

★ Practice Test 1	_____	13
★ Practice Test 2	_____	27
★ Practice Test 3	_____	42
★ Practice Test 4	_____	56
★ Practice Test 5	_____	71
★ Practice Test 6	_____	85
Practice Test Answer Keys	_____	99
Practice Test Answers and Explanations	_____	103

1) A sandwich shop offers a choice of 2 breads, 3 proteins, and 4 vegetables. If you choose one of each, how many different sandwiches are possible?

☐ A. 9☐ C. 24☐ B. 18☐ D. 36

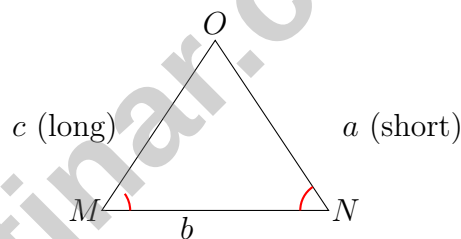
2) A bicycle costs \$80. The price is marked up by 25%. What is the new price?

☐ A. \$55☐ C. \$105☐ B. \$20☐ D. \$100

3) Solve for x : $-3(x - 2) = 15$

☐ A. $x = -3$ ☐ C. $x = 3$ ☐ B. $x = -1$ ☐ D. $x = 7$

4)



A triangle has sides labeled a (short), b (medium), and c (long). The angle opposite the shortest side is:

☐ A. Always 60° ☐ C. The smallest angle☐ B. The largest angle☐ D. Exactly 90° 

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- 5) A cylindrical container has a radius of 6 cm. If the height is tripled, what is the new volume compared to the original? Use $\pi \approx 3.14$.
- ☐ A. The new volume equals the original ☐ C. The new volume is 9 times the original
- ☐ B. The new volume is 3 times the original ☐ D. The new volume is 27 times the original
- 6) A news outlet wants to estimate the average hourly wage of workers in a city. It surveys 200 workers at an airport during afternoon shifts. Why is this sample problematic?
- ☐ A. Airport workers may have different wage patterns than all workers in the city ☐ C. Afternoon shift workers are not employed
- ☐ B. The sample size is too small ☐ D. Only airport workers can be surveyed
- 7) Store A has a mean daily sales of \$450 with a MAD of \$30. Store B has a mean of \$480 with a MAD of \$90. Which conclusion is best supported?
- ☐ A. Store A typically sells more than Store B ☐ C. Store B typically sells more, but with less consistency
- ☐ B. Both stores are equally consistent ☐ D. Store B's sales are more predictable due to lower MAD
- 8) A square has vertices at $(0,0)$, $(2,0)$, $(2,2)$, and $(0,2)$. If the square is reflected over the line $y = -x$, what is the x -coordinate of the image of the vertex originally at $(2,0)$?



- 9) Two similar rectangles have a scale factor of 2.5. The smaller rectangle has a perimeter of 16 inches. What is the perimeter of the larger rectangle?

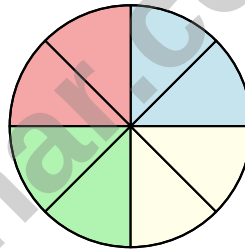
- 10) A circle graph shows the budget allocation for a school: Athletics 20%, Academics 50%, Support Services 20%, Other 10%. If the total budget is \$500,000, how much is allocated to Academics?

☐ A. \$50,000

☐ C. \$200,000

☐ B. \$100,000

☐ D. \$250,000



11)

A spinner has 8 equal sections: 2 blue, 2 red, 2 green, and 2 yellow. Which expression shows the complement rule for finding the probability of NOT spinning blue or red?

☐ A. $\frac{2}{8}$

☐ C. $1 - \frac{1}{2}$

☐ B. $\frac{3}{8}$

☐ D. $\frac{6}{8}$



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- 1) An investment grew from \$1 000 to \$1 210. What is the percent increase?
- ☐ A. 17.4% ☐ C. 21%
- ☐ B. 18.2% ☐ D. 121%
- 2) To create a simulation of selecting a random student from a class of 28 students, a researcher uses a die rolled 4 times. Is this an appropriate model?
- ☐ A. Yes, because a die can represent any number ☐ C. No, because the die produces at most 6 outcomes per roll
- ☐ B. Yes, because 4 rolls produce many different outcomes ☐ D. No, because the die does not produce equally likely outcomes for all values 1–28
- 3) In a compound experiment, you draw a letter from {A, E, I} and select a number from 1 to 4. How many outcomes are in the sample space?
- ☐ A. 7 ☐ C. 12
- ☐ B. 9 ☐ D. 16
- 4) A basketball player tracked free-throw success in practice sessions. The results are:

Session	Attempts	Made
Session 1	50	38
Session 2	75	54
Session 3	100	76

What is the overall experimental probability of success across all three sessions?

- ☐ A. 0.75 ☐ C. $\frac{168}{225}$
- ☐ B. 0.76 ☐ D. 0.71



- 5) Two events A and B are independent. $P(A) = \frac{1}{2}$ and $P(B) = \frac{1}{3}$. What is $P(A \text{ or } B)$?
- ☐ A. $\frac{2}{5}$ ☐ C. $\frac{5}{6}$
☐ B. $\frac{2}{3}$ ☐ D. $\frac{1}{6}$
- 6) If a student estimated 55 pages in a book and the percent error was 10%, how many pages did the book actually have?
- ☐ A. 61 pages ☐ C. 49.5 pages
☐ B. 60 pages ☐ D. 50 pages
- 7) Expand: $-\frac{1}{2}(6x - 4)$
- ☐ A. $-3x + 2$ ☐ C. $3x - 2$
☐ B. $-3x - 2$ ☐ D. $-3x - 4$
- 8) Jordan invests \$2000 at a simple interest rate of 3.5% per year for 5 years. How much interest will he earn?
- ☐ A. \$70 ☐ C. \$350
☐ B. \$175 ☐ D. \$700
- 9) Evaluate the expression: $-15 - 6 + (-4)$. (Remember: subtraction and addition are performed left to right.)
- ☐ A. -25 ☐ C. -5
☐ B. -13 ☐ D. 5
- 10) Which expression is equivalent to $-3(2x + 5)$?
- ☐ A. $-6x - 15$ ☐ C. $6x - 15$
☐ B. $-6x + 15$ ☐ D. $-6x + 5$

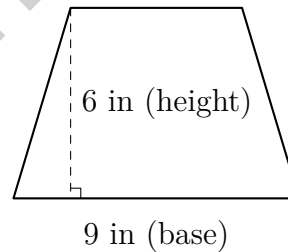
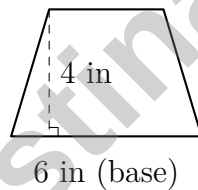


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- 1) A box plot shows video download times (in seconds) for two internet providers. Provider A: $Q1 = 8$, Median = 12, $Q3 = 16$. Provider B: $Q1 = 6$, Median = 12, $Q3 = 20$. Which provider has more consistent performance?

- ☐ A. Provider A (IQR = 8, tighter spread) ☐ C. Both providers are identical
- ☐ B. Provider B (IQR = 14, more flexible) ☐ D. Provider B (faster upper quartile)

- 2) A spinner has 8 equal sections. If it is spun 240 times, approximately how many times would you expect one specific section to appear?



3)

The two trapezoids are similar. The left trapezoid has a base of 6 inches and a height of 4 inches. The right trapezoid has a base of 9 inches. What is the scale factor from left to right?

- ☐ A. 1.25 ☐ C. 1.67
- ☐ B. 1.5 ☐ D. 2



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4) A bagel has diameter 4 inches. Approximately, what is its circumference? Use $\pi \approx 3.14$.

☐ A. 6.28 in

☐ C. 25.12 in

☐ B. 12.56 in

☐ D. 50.24 in

5) A student mistakenly used the formula $A = \pi d^2$ instead of $A = \pi r^2$ for a circle with diameter 8 inches. What answer did the student get? (Use $\pi \approx 3.14$.)

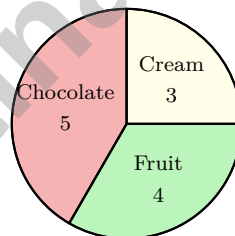
☐ A. 25.12 in²
☐ C. 100.48 in²
☐ B. 50.24 in²
☐ D. 200.96 in²

6) A line plot shows the number of hours a student practices violin each week over 10 weeks: 1, 2, 2, 2, 3, 3, 3, 3, 4, 5. Which measure best describes the typical practice time?

☐ A. The mean (average)

☐ C. The median

☐ B. The mode

☐ D. The range


7)

A restaurant menu has 12 desserts: 5 chocolate, 4 fruit, and 3 cream-based. If you pick one at random, what is the probability of choosing a chocolate or cream-based dessert?

☐ A. $\frac{5}{12}$
☐ C. $\frac{2}{3}$
☐ B. $\frac{8}{12}$
☐ D. $\frac{1}{2}$


Nebraska NSCAS Growth 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 Nebraska NSCAS Growth practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.SP.5-7.SP.8) By the counting principle: $2 \times 3 \times 4 = 24$ different sandwiches.
- 2) **Choice D is correct.** (7.RP.3) The markup is $\frac{25}{100} \times 80 = 20$. Add to original: $80 + 20 = \$100$.
- 3) **Choice A is correct.** (7.EE.4a) Distribute: $-3x + 6 = 15$. Subtract 6: $-3x = 9$. Divide by -3 : $x = -3$.
- 4) **Choice C is correct.** (7.G.1-7.G.5) In any triangle, the smallest angle is always opposite the shortest side, and the largest angle is opposite the longest side.
- 5) **Choice B is correct.** (7.G.4-7.G.6) Original: $V_1 = \pi r^2 h$. New: $V_2 = \pi r^2(3h) = 3\pi r^2 h = 3V_1$. Volume is directly proportional to height.
- 6) **Choice A is correct.** (7.SP.1-7.SP.4) Airport jobs may have specific wage structures, making them unrepresentative of all city workers.
- 7) **Choice C is correct.** (7.SP.1-7.SP.4) Store B has a higher mean (\$480 vs. \$450), indicating higher center. Its larger MAD (\$90 vs. \$30) shows greater variability, meaning less consistency. A is false (Store A's mean is lower). B is false (MADs differ). D is false (lower MAD = more predictable, but Store B has higher MAD).
- 8) **The correct answer is 0.** (7.G.1-7.G.5) Reflection over $y = -x$ uses the rule $(x, y) \rightarrow (-y, -x)$. Applying this to $(2, 0)$: $(2, 0) \rightarrow (-0, -2) = (0, -2)$. The x -coordinate of the image is 0.
- 9) **The correct answer is 40.** (7.G.1-7.G.5) Perimeter scales linearly by the scale factor. Larger perimeter = $16 \times 2.5 = 40$ inches.
- 10) **Choice D is correct.** (7.SP.1-7.SP.4) 50% of \$500,000 = $0.50 \times 500,000 = 250,000$ allocated to Academics.
- 11) **Choice C is correct.** (7.SP.5-7.SP.8) Blue or red: $\frac{4}{8} = \frac{1}{2}$. Complement: $1 - \frac{1}{2} = \frac{1}{2} = \frac{4}{8}$.
- 12) **Choice D is correct.** (7.SP.6) Experimental probability (0.29) is based on observed data and differs from theoretical probability (0.25) because of random variation. Both values are relative frequencies—ratios of favorable outcomes to total trials.
- 13) **Choice B is correct.** (7.SP.5-7.SP.8) Pass math AND fail history: $\frac{2}{3} \cdot \frac{1}{4} = \frac{2}{12}$. Fail math AND pass history: $\frac{1}{3} \cdot \frac{3}{4} = \frac{3}{12}$. Total: $\frac{2}{12} + \frac{3}{12} = \frac{5}{12}$.
- 14) **Choice B is correct.** (7.SP.1-7.SP.4) After removing 49 from stem 4 and correcting to 94 in stem 9, the maximum becomes 107 (stem 10, leaf 7).
- 15) **Choice B is correct.** (7.G.4-7.G.6) $h = \frac{V}{B} = \frac{576}{72} = 8$ ft.
- 16) **The correct answer is 16.** (7.G.4-7.G.6) Circumference = $\pi d = 3.14 \times 0.6 = 1.884$ m. Rotations = $30 \div 1.884 \approx 16$.
- 17) **Choice B is correct.** (7.SP.1-7.SP.4) The differences between 38%, 40%, and 42% demonstrate normal sampling variability. Even though all three are random samples from the same population, each will produce slightly different estimates due to random chance. The true population proportion is likely near these values (around 40%), but exact values vary.
- 18) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|35-40|}{40} \times 100\% = \frac{5}{40} \times 100\% = 12.5\%$.
- 19) **Choice B is correct.** (7.EE.1-7.EE.2) Distribute 3: $(2y) \cdot 3 + (-4) \cdot 3 = 6y - 12$. The sign of the term remains with it when distributed.
- 20) **Choice D is correct.** (7.RP.3) $I = 12000 \times 0.095 \times 4 = \4560 . $A = 12000 + 4560 = \$16560$.
- 21) **Choice D is correct.** (7.NS.1-7.NS.3) Step 1 error: When subtracting a negative, flip the sign of the subtrahend (the -5 becomes $+5$), so the rule is $-3 - (-5) = -3 + 5$. Step 2 error follows from Step 1. The correct answer is 2. This tests the most common student error.
- 22) **The correct answer is B,C.** (7.G.1-7.G.5) B and C are equivalent and correct: two angles are equal (50° each), so by the Isosceles Triangle Theorem, the sides opposite those angles must be equal. A is wrong (equilateral requires all angles 60°). D is wrong (two angles are the same).
- 23) **Choice B is correct.** (7.EE.1-7.EE.2) Factor out the GCF 6 and the negative: $-6m + 18 = -6(m - 3)$. Check: $-6(m - 3) = -6m + 18$.
- 24) **Choice D is correct.** (7.RP.1-7.RP.3) Actual dimensions: $4 \times 10 = 40$ feet; $2.5 \times 10 = 25$ feet. Perimeter = $2(40 + 25) = 130$ feet.
- 25) **Choice C is correct.** (7.RP.3) $\frac{36}{48} = \frac{3}{4} = 0.75 = 75\%$.



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Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 6 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

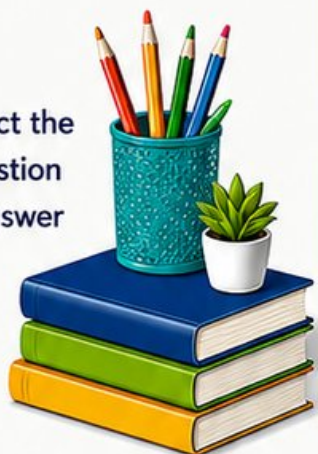
Your Persistence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **6** 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:

6 Full-Length Printed Tests

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!

Don't lose it—your extra practice and success start here!



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