

9

New Hampshire

NH SAS

GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



9
FULL-LENGTH
PRACTICE
TESTS

$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



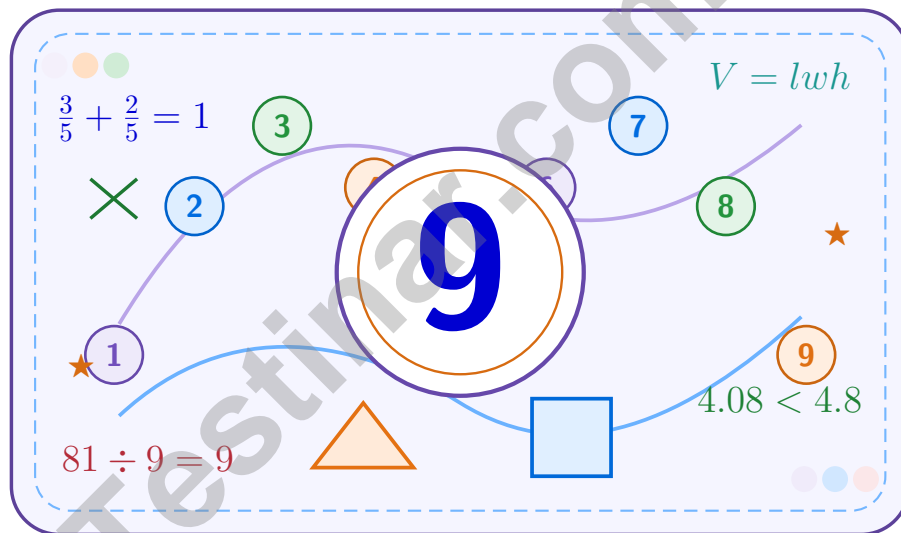
Improve Math Skills



Achieve Success

9 New Hampshire NH SAS Grade 5 Math Practice Tests

A nine-step confidence climb with clear review, smart strategy, and practice that gets stronger every round



Nine full tests, focused skill boosters, and student-friendly support from start to finish for Grade 5 mathematicians who want to climb higher.

Jay Daie and Reza Nazari



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Welcome to the Confidence Climb

This book is here to help you practice with purpose and rise step by step

To the Grade 5 Mathematician

This practice book is a place to think, try, fix, and grow. You do not have to be perfect on the first question or the first test. What matters most is careful effort, clear work, and learning from each round of practice.

Use these nine tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up fast.

Try

Give each problem your best thinking.

Check

Study mistakes and learn what happened.

Rise

Bring that lesson into the next round.

A strong habit for every page: read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

How to Use This Book

A simple practice routine that turns nine tests into steady growth

A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

Step 1: Warm Up

Start with the quick review.
Spend a few minutes refreshing the ideas before you start a test.

Step 2: Take the Test

Take one full practice test.
Work in a quiet space and let accuracy matter more than speed.

Step 3: Study the Pattern

Check your work honestly.
Circle missed questions and notice patterns in the mistakes.

Step 4: Learn, Then Retry

Read the explanation and try again.
Learning happens after the test too. Fixing mistakes is one of the smartest parts of practice.



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Test Overview

What this practice book helps students do

These practice tests are designed to help Grade 5 students get comfortable with the kind of thinking used on the New Hampshire NH SAS. The goal is bigger than only getting answers right. Students are practicing how to read closely, choose a strategy, solve carefully, and explain their work when needed.

Selected-Response Questions

Students solve the problem and choose the best answer. Estimating first and crossing out weak choices can save time and points.

Constructed-Response Questions

Students show their thinking, steps, models, or explanations. Even when unsure, writing what they know can help organize the problem.

Grade 5 Skills You Will Practice Often

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, decimals, and mixed numbers
- perimeter, area, volume, and measurement conversions
- coordinate points, patterns, graphs, and tables
- geometry and multi-step word problems

What strong work looks like: the answer is correct, the steps are clear, the labels or units are included, and the final result makes sense.



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Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

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TIME

1 minute (min) = 60 seconds (sec) 1 week = 7 days

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1) True or False: Every parallelogram is a quadrilateral.

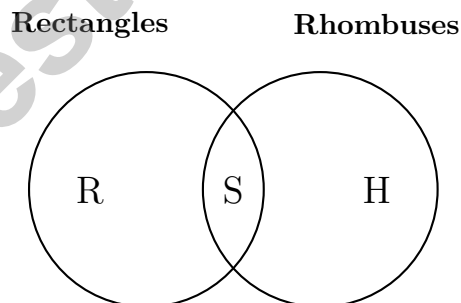
- A. True, because parallelograms have four sides.
- B. False, because parallelograms have more than four sides.
- C. True, only for squares.
- D. False, because they are not polygons.

2) Divide: $748 \div 22$

34×22	?
----------------	---

22

- A. 33
- B. 34
- C. 35
- D. 36
- 3) In the standard Grade 5 hierarchy, a square is both a rectangle and a rhombus. The Venn diagram has one circle for rectangles and one circle for rhombuses:



What type of quadrilateral should label S represent?

- A. A pentagon
- B. A rectangle with unequal side lengths
- C. A triangle
- D. A square



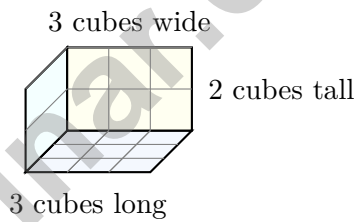
4) A $\frac{1}{2}$ -pound block of cheese is divided into 4 equal portions. How heavy is each portion?

Record your answer in the space provided.

5) Which statement is true?

- A. $0.5 \neq 0.50$
 C. $0.5 > 0.50$
 B. $0.5 < 0.50$
 D. $0.5 = 0.50$

6) How many unit cubes are needed to fill a rectangular prism that is 3 cubes long, 3 cubes wide, and 2 cubes tall?



- A. 9
 C. 18
 B. 12
 D. 27

7) A jogger runs at different paces:

Distance	Time
3 km	20 minutes
4.5 km	30 minutes

What is the total time in minutes and the total distance in meters?

- A. 50 minutes, 7,500 meters
 C. 50 minutes, 7,505 meters
 B. 50 minutes, 7,550 meters
 D. 55 minutes, 7,500 meters



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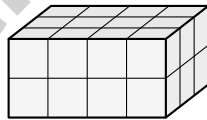
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- 1) Distance problem: an athlete runs 0.25 miles. In a training program, she runs this distance 100 times. How many miles total?
- A. 2.5 miles C. 250 miles
 B. 25 miles D. 2500 miles
- 2) For inputs 1, 2, and 3, Rule A gives 2, 4, and 6. Rule B gives 1, 2, and 3. Student 1 plots (1, 2), (2, 4), (3, 6). Student 2 plots (2, 1), (4, 2), (6, 3). Which student correctly plots the ordered pairs as (Rule A, Rule B)?
- A. Student 1 C. Both are correct
 B. Student 2 D. Neither is correct
- 3) A recipe calls for $\frac{2}{3}$ cup of sugar and $\frac{1}{3}$ cup of flour. What is the total amount of dry ingredients measured?
- A. $\frac{1}{3}$ cup C. 1 cup
 B. $\frac{1}{2}$ cup D. $\frac{2}{3}$ cup
- 4) You can see the front layer of a rectangular prism has 8 unit cubes. If the prism is 3 cubes deep, how many total unit cubes are there?



- A. 8 unit cubes C. 24 unit cubes
 B. 16 unit cubes D. 32 unit cubes
- 5) A solid is made from two non-overlapping rectangular prisms. One prism is 6 m by 4 m by 4 m. The other is 6 m by 4 m by 3 m. What is the total volume?
- A. 168 cubic meters C. 112 cubic meters
 B. 144 cubic meters D. 280 cubic meters



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1) Pattern A has dots 1, 4, 7, 10, ... Pattern B has dots 2, 8, 14, 20, ... Which statement describes the relationship between matching figures?

- A. Pattern B has 1 more dot than Pattern A. C. Pattern B has 3 fewer dots than Pattern A.
 B. Pattern B has twice as many dots as Pattern A. D. Pattern B has the same number of dots as Pattern A.

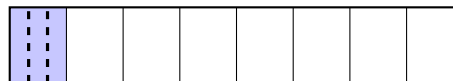
2) A table shows products when multiplying 3.6 by different numbers. Complete the pattern.

Multiply 3.6 by:	Product
0.5	1.8
1	3.6
2	7.2
4	?

- A. 10.8 C. 14.4
 B. 12.4 D. 15.2

3) The model shows $\frac{1}{8}$ of a whole split into 3 equal parts. What fraction of the whole is each small part?

$\frac{1}{8}$ split into 3



1 whole split into 8 equal parts

- A. $\frac{1}{8}$ C. $\frac{1}{11}$
 B. $\frac{1}{3}$ D. $\frac{1}{24}$



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1) Add: $\frac{1}{9} + \frac{1}{6}$

A. $\frac{2}{15}$

B. $\frac{5}{18}$

C. $\frac{2}{54}$

D. $\frac{1}{15}$

2) A gas tank has $15\frac{1}{2}$ gallons. After a trip, it has $8\frac{3}{4}$ gallons left. How much gas was used?

A. $6\frac{1}{4}$ gal

B. $6\frac{3}{4}$ gal

C. 7 gal

D. $7\frac{1}{4}$ gal

3) A quadrilateral has 2 pairs of parallel sides and 4 right angles, but not all sides are equal. Which classification best describes it?

A. Square

B. Pentagon

C. Trapezoid

D. Rectangle

4) Find the missing multiplier: $? \times 400 = 360,000$

A. 900

B. 90

C. 9,000

D. 9

5) How many $\frac{1}{6}$ -cup servings of nuts are in 2 cups?

Record your answer in the space provided.



Practice Test Answer Keys

How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

Good correction habits build strong New Hampshire scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** (5.G.B.4) A quadrilateral is any four-sided polygon. Since every parallelogram has four sides, every parallelogram is also a quadrilateral.
- Choice B is correct.** (5.NBT.B.6) $22 \times 34 = 748$. Area model confirms $748 \div 22 = 34$.
- Choice D is correct.** (5.G.B.4) A square is both a rectangle and a rhombus, so it belongs in the intersection.
- The correct answer is $\frac{1}{8}$.** (5.NF.B.7c) $\frac{1}{2} \div 4 = \frac{1}{8}$ lb. Each portion is a fair share of the half-pound block.
- Choice D is correct.** (5.NF.B.7c) Both equal 5 tenths or 50 hundredths. Trailing zeros do not change the decimal's value.
- Choice C is correct.** (5.NBT.A.3b) Count the cubes by layers: 3 by 3 makes 9 cubes in each layer, and there are 2 layers. So $3 \times 3 \times 2 = 18$ unit cubes.
- Choice A is correct.** (5.MD.A.1) Total time: $20 + 30 = 50$ minutes. Total distance: $3 + 4.5 = 7.5$ km = 7,500 meters.
- Choice A is correct.** (5.NF.B.5a) Since $\frac{6}{5} > 1$, multiplying by it enlarges the number. $11 \times \frac{6}{5} = 13\frac{1}{5} > 11$.
- Choice B is correct.** (5.NF.A.2) $1\frac{1}{12} \approx 1$ and $\frac{7}{8} \approx 1$. So $1\frac{1}{12} + \frac{7}{8} \approx 1 + 1 = 2$. All others sum to less than 1.
- Choice D is correct.** (5.G.A.2) The distance from (2, 2) to (6, 2) along the bottom is $6 - 2 = 4$ units. All sides of a square are equal, so each side is 4 units long.
- Choice A is correct.** (5.NBT.A.2) A is 150 cm, B is 15 cm, C is 1.5 cm. The largest is 150 cm.
- Choice B is correct.** (5.OA.A.2) The words "sum of 15 and 6" make one grouped total, (15 + 6). One-third of that total means divide it by 3.
- Choice A is correct.** (5.OA.A.2) There are 5 aprons, and each apron needs $3\frac{1}{2}$ yards. Multiply: $5 \times 3\frac{1}{2} = 5 \times \frac{7}{2} = \frac{35}{2} = 17\frac{1}{2}$ yards.
- Choice A is correct.** (5.OA.A.1) First find how many students the 6 buses would hold: $6 \times 32 = 192$. Then subtract the 8 absent students: $192 - 8 = 184$.
- Choice D is correct.** (5.NBT.A.2) Dividing by 10 moves the decimal point one place to the left. $4,300 \div 10 = 430$.
- Choice A is correct.** (5.NBT.A.2) Borrow 1: $9\frac{1}{3} = 8\frac{4}{3}$. Then $8\frac{4}{3} - 4\frac{2}{3} = 4\frac{2}{3}$ gallons.
- Choice D is correct.** (5.NBT.B.5) Round 312 to 300. Then $300 \times 8 = 2,400$.
- Choice D is correct.** (5.NBT.B.5) \$14.50 rounds up to \$15 and is the smallest amount shown that rounds to \$15. \$14.49 rounds to \$14, \$15.50 rounds to \$16, and \$13.50 rounds to \$14.
- Choices A, C are correct.** (5.OA.A.2) A is true because $20 + 1$ creates one extra group of 5. C is true because $100 - 1$ creates one fewer group of 9 than 100 groups. B changes the grouping, and D is equal rather than greater.
- Choice D is correct.** (5.NBT.A.2) To convert meters to kilometers, divide by 1,000: $4,800 \div 1,000 = 4.8$. The road is 4.8 km long.
- Choice B is correct.** (5.G.A.2) The first coordinate, 8, matches the x-axis label: minutes. The second coordinate, 2, matches the y-axis label: miles completed. So the point means miles completed is 2 when minutes is 8.
- Choice A is correct.** (5.NF.A.2) $\frac{1}{2}$ and $\frac{2}{3}$ have different denominators. With LCD 6: $\frac{1}{2} = \frac{3}{6} \neq \frac{4}{6} = \frac{2}{3}$.
- Choice B is correct.** (5.NBT.A.2) Use $5 \times 8 = 40$, then include the four zeros from 500 and 800. That gives 400,000, which has 5 zeros.
- Choice B is correct.** (5.NBT.A.2) Three copies of $\frac{3}{7}$: $3 \times \frac{3}{7} = \frac{9}{7} = 1\frac{2}{7}$.
- Choice C is correct.** (5.NF.B.7c) $20 \div \frac{1}{2}$ asks how many halves are in 20. There are 2 halves in each whole, so $20 \times 2 = 40$.
- The correct answer is 34,000.** (5.NF.B.7c) $10^3 = 1,000$, and multiplying by 1,000 attaches three zeros: 34,000.
- Choice D is correct.** (5.NBT.A.2) The model has 6 equal parts and 1 part is double-shaded, so the product is $\frac{1}{6}$.
- Choice B is correct.** (5.OA.B.3) The first pattern adds 8 each time. The second pattern multiplies by 2 each time, so it follows a different rule.
- Choice A is correct.** (5.NF.B.7c) $\frac{1}{2} \div 5 = \frac{1}{2} \times \frac{1}{5} = \frac{1}{10}$.
- The correct answer is 12.85.** (5.MD.C.5) Total spent: $8.65 + 3.50 = 12.15$. Remaining: $25.00 - 12.15 = 12.85$.



Mathematical Explorer's Journey

Welcome, Brave Explorer!

◇ Phenomenal expedition! You've successfully navigated through 9 mathematical territories, exploring every concept and discovering new strategies along the way! You've mapped out the landscape of Grade 5 math with the courage of a true adventurer. Each problem was uncharted territory, and you charted it with skill and determination! ◇

★ **Wisdom from veteran explorers:** the most rewarding journeys are the ones that challenge you most. Through 9 comprehensive practice tests, you've climbed mathematical mountains, crossed conceptual rivers, and discovered solutions in places you didn't know existed. Your exploration skills are strong, your map is detailed, and you're ready for any test-day adventure! ★

Explorer's Achievement Map

- **Territory Covered:** You've explored every major mathematical concept thoroughly!
- **Navigation Skills:** You can find your way through any problem with multiple solution paths!
- **Equipment Mastered:** You know exactly which strategies to use in different situations!
- **Expedition Ready:** You're fully prepared for the ultimate test day adventure!

Important explorer wisdom: experienced adventurers always review their maps before important journeys. Take a few moments before test day to mentally review your successful strategies. Visualize yourself confidently tackling each type of problem. You've already proven you can handle the expedition!

If you'd like to share your experience or have questions, please email me at reza@testinar.com. I'd love to hear from you!

Reza Nazari & Jay Daie

Your Math Teacher and Test-Day Coach

PRACTICE MORE. ACHIEVE MORE.

Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

9

**FULL-LENGTH
PRACTICE
TESTS**

- ✓ Realistic.
- ✓ Rigorous.
- ✓ Results-Driven.

More practice today for a **stronger** tomorrow.



THIS BOOK HELPS YOUR CHILD:



Build Confidence

Familiar, focused practice reduces anxiety and boosts self-belief.



Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



Improve Test Readiness

Full-length tests help students understand test format, pacing, and question types.



Track Progress

Identify strengths and target areas with purposeful practice.



Achieve Success

Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ And More!



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