

GRADE

6

MATH

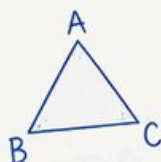
6

New Hampshire NH SAS

PRACTICE TESTS

Standards-Aligned
Steady Southern
Problem Solving for
Comprehensive
Assessment Program

$$2x + 3 = 11$$



$$7^2 = 49$$

BUILD SKILLS.
GAIN CONFIDENCE.
SUCCEED!



6 PRINTED TESTS

Realistic practice to build confidence and mastery



2 ONLINE TESTS

Extra practice for continued success



DETAILED ANSWER EXPLANATIONS

Learn with step-by-step solutions



FOCUSED & EFFECTIVE

Target key math skills with purposeful practice



6 PRINTED TESTS + 2 ONLINE TESTS

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



PRACTICE

Sharpen skills with targeted practice tests



REVIEW

Understand concepts and strengthen skills

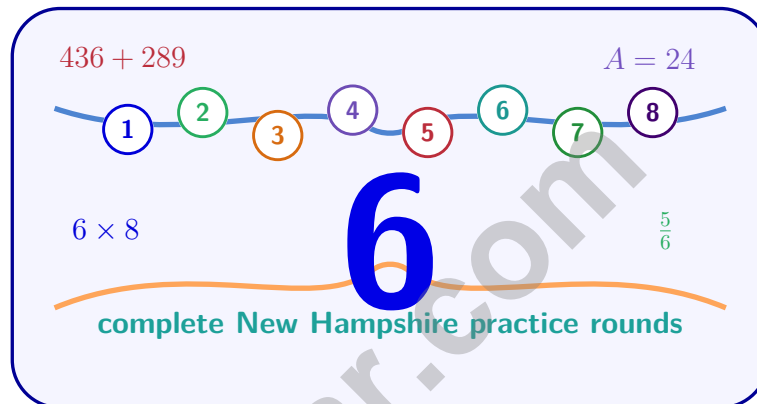


SUCCEED

Build confidence and achieve your best

6 New Hampshire NH SAS Grade 6 Math Practice Tests

Standards-Aligned Granite-State Precision for New Hampshire Statewide Assessment System



Six complete 40-question Grade 6 practice rounds for NH SAS, built for granite-state precision with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, New Hampshire Math Explorer!

Eight focused rounds using granite-state precision

This book gives you six full Grade 6 practice tests for NH SAS. Each round uses mountain towns, forest trails, and crisp problem notes as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your New Hampshire Practice Promise

Build a solid solution: read closely, write the relationship, and test the answer.

Read

Plan

Check

How to Use This Book

A six-session routine for granite-state precision

1. **Work in order.** Take one 40-question test at a time in a quiet place.
2. **Preview the skills.** Scan the quick review pages before beginning the first round.
3. **Correct actively.** Retry missed items before reading the full explanation.
4. **Mark confidence.** Put a small star beside problems where your plan felt strong.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

New Hampshire review rhythm: Complete a round, polish the rough spots, and start the next test with a clearer plan.



What Is Inside?

Eight NH SAS tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–5	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 6	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Granite-state precision means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!
For more practice
& answers

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1) What is $4,752 \div 24$?

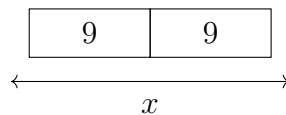
A. 198

C. 202

B. 200

D. 206

2) A bar model shows a number split into two equal parts. Each part is 9. Which equation and solution is correct?



A. $\frac{x}{2} = 9$; $x = 18$

C. $2x = 9$; $x = 4.5$

B. $x + 2 = 9$; $x = 7$

D. $\frac{x}{2} = 9$; $x = 4.5$

3) A table shows the number of hours worked (h) and the amount of pay earned (p , in dollars).

Hours (h)	1	2	3	4
Pay (p)	12	24	36	48

Which option gives both the correct unit rate and the correct equation for the relationship?

A. Unit rate: \$12 per hour; equation: $p = 12h$

C. Unit rate: \$12 per hour; equation: $h = 12p$

B. Unit rate: \$24 per hour; equation: $p = 24h$

D. The relationship is not proportional



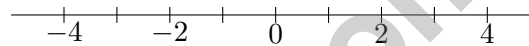
- 4) A student receives a monthly allowance of \$360. She allocates: 40% to savings, 35% to entertainment, 15% to gifts, and the remainder to snacks. How much does she spend on snacks?

A. \$18 C. \$54
 B. \$36 D. \$126

- 5) What is the least common multiple (LCM) of 6 and 8?

A. 24 C. 14
 B. 18 D. 48

- 6) On a number line, which two integers are exactly 8 units apart?



A. -4 and 0 C. 0 and 4
 B. -2 and 2 D. -4 and 4

- 7) A bank account has a balance of -\$50 (overdrawn by \$50). If the account holder withdraws \$15 more, what is the new balance?

A. -\$35 C. \$65
 B. \$35 D. -\$65

- 8) A school has s students. It also has $s + 25$ staff members. If the school has 600 students, how many staff members does it have?



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- 9) Find the area of a triangle with base 25 feet and height 8 feet.



- 10) Marcus has a bank account with a balance of -35 dollars (overdrawn). He deposits \$50. What is his new balance?

- A. -85 dollars C. 15 dollars
 B. -15 dollars D. 85 dollars

$$(3 \times 2)^2$$

Parentheses: $3 \times 2 = 6$

Exponent: $6^2 = 36$

- 11)

What is the correct value of $(3 \times 2)^2$?

- A. 12 C. 36
 B. 18 D. 72

- 12) Write an expression for “half the product of 10 and a number m ”.

- A. $\frac{10m}{2}$ C. $5m + m$
 B. $\frac{10 + m}{2}$ D. $10 \cdot \frac{m}{2}$



1) Evaluate: $(7 - 4)^2 + 5$

A. 8

C. 21

B. 14

D. 53

2) Comparing two data sets: Set P has range 20 and Set Q has range 15. Both have the same mean. What conclusion can you draw?

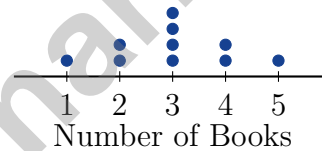
A. Set P is more spread out than Set Q.

C. Both sets have identical distributions.

B. Set Q is more spread out than Set P.

D. Range is not useful for comparing data sets.

3) The dot plot shows the number of books read by students last month. How many students read exactly 3 books?



A. 2

C. 4

B. 3

D. 5

4) Two classes compare their test results using box plots. Class 1: IQR = 10. Class 2: IQR = 25. Which is most accurate?

A. Class 1 has more students

C. Class 1's middle 50% of scores are more tightly clustered

B. Class 2 has higher test scores

D. Class 1 did better overall



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- 1) Which pair of numbers has a GCF of 5?
- A. 15 and 25 C. 12 and 20
 B. 10 and 20 D. 14 and 35
- 2) A garden plot covers 120 square meters. If 45% is planted with vegetables, how many square meters are planted with vegetables?
- A. 36 m² C. 54 m²
 B. 45 m² D. 66 m²
- 3) A recipe uses a 7:3 ratio of flour to baking powder. A graph with flour on the x-axis and baking powder on the y-axis contains the point (14, 6). Is this point correct for the 7:3 ratio?
- A. Yes, because $14 \times 3 = 42$ C. No, because the ratio should be
 B. Yes, because $14 \div 7 = 2$ and $2 \times 3 = 6$ D. No, because the y-value should be 7
- 4) Preston has: a bike worth \$250, a phone worth \$400, cash savings of \$150, and a debt of \$200 (money owed). What is his net worth?
- A. \$400 C. \$800
 B. \$600 D. \$1000
- 5) A scale drawing of a garden uses the scale 1 inch = 6 feet. How long is the actual garden if the drawing shows 2.5 inches?
- A. 8.5 feet C. 15 feet
 B. 12 feet D. 18 feet



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- 6) A teacher records the number of pages read by 11 students in a class. The stem-and-leaf plot shows:

Stem	Leaf
10	2, 5, 8
11	0, 3, 6, 9
12	1, 4, 7, 8

How many more students read at least 110 pages than read fewer than 110 pages?

- 7) What is $5,832 \div 27$?

- A. 216 C. 220
 B. 210 D. 225

- 8) A circle graph shows 600 total voters. One section represents 16.5%. How many voters are in this section? Express your answer as a whole number.

- 9) What is the GCF of 21 and 28?

- A. 2 C. 7
 B. 4 D. 14



New Hampshire NH SAS Practice Test Answer Keys

How to use this New Hampshire NH SAS answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to granite-state precision
3. rework the problem before reading the full explanation, using this reminder:
Build a solid solution: read closely, write the relationship, and test the answer.

A calm New Hampshire correction routine turns every missed item into useful practice. Complete a round, polish the rough spots, and start the next test with a clearer plan.



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New Hampshire Practice Test Answers and Explanations

Review the six printed NH SAS tests with solid, precise, and ready for the next trail habits.

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(6.NS.B.2)** $4,752 \div 24 = 198$. Check: $24 \times 198 = 4,752$.
- Choice A is correct.** **(6.EE.B.5)** The number x is split into two equal parts of 9 each, so $\frac{x}{2} = 9$. Multiplying by 2 gives $x = 18$.
- Choice A is correct.** **(6.NS.C.7d)** The ratio p/h is constant: $12/1 = 24/2 = 36/3 = 48/4 = 12$. That means the unit rate is \$12 per hour, and the equation $p = 12h$ represents the proportional relationship.
- Choice B is correct.** **(6.EE.C.9)** Remainder: $100\% - 40\% - 35\% - 15\% = 10\%$ of $\$360 = 0.10 \times 360 = \36 .
- Choice A is correct.** **(6.NS.B.4)** Multiples of 6: 6, 12, 18, 24, 30, ... Multiples of 8: 8, 16, 24, 32, ... The least common multiple is 24.
- Choice D is correct.** **(6.NS.C.5)** The distance between -4 and 4 is $4 - (-4) = 4 + 4 = 8$ units. These two numbers are 8 units apart on a number line.
- Choice D is correct.** **(6.NS.B.3)** Starting at -50 and withdrawing (going more negative) \$15: $-50 - 15 = -65$.
- The correct answer is 625.** **(6.EE.B.6)** If $s = 600$, then $\text{staff} = s + 25 = 600 + 25 = 625$.
- The correct answer is 100.** **(6.G.A.1)** $A = \frac{1}{2} \times 25 \times 8 = 100 \text{ ft}^2$.
- Choice C is correct.** **(6.EE.A.3)** Adding a deposit to an overdrawn balance: $-35 + 50 = 15$ dollars.
- Choice C is correct.** **(6.EE.A.1)** Order of operations starts inside the parentheses: $3 \times 2 = 6$. Then apply the exponent to that single number: $6^2 = 36$. (Note: writing it as $3^2 \times 2^2$ first happens to give the same answer for multiplication inside parentheses, but the diagram models the correct PEMDAS path: simplify the parentheses to one number, then square.)
- Choice A is correct.** **(6.EE.A.2a)** "The product of 10 and m " is $10m$. "Half" that product means divide by 2: $\frac{10m}{2}$.
- Choice A is correct.** **(6.EE.A.2c)** Substitute $m = 2$: $5(2) - 7 = 10 - 7 = 3$.
- Choice B is correct.** **(6.EE.A.3)** Group: $(7x - x) + (3y + 2y) + 4 = 6x + 5y + 4$.
- Choice B is correct.** **(6.EE.B.8)** "Must not exceed" means at most 50: $w \leq 50$.
- Choice D is correct.** **(6.EE.B.8)** Graph 1 is $x > -1$, Graph 2 is $x \geq -1$, Graph 3 is $x < -1$, Graph 4 is $x \geq 4$. None of these four represent the same inequality.
- Choice A is correct.** **(6.EE.C.9)** The line passes through $(1, 2)$ and $(3, 6)$. The slope is $\frac{6-2}{3-1} = \frac{4}{2} = 2$, giving $y = 2x$.
- Choice C is correct.** **(6.G.A.1)** Width: $11 - 3 = 8$ units. Height: $7 - 1 = 6$ units. Area = $8 \times 6 = 48$ square units.
- Choice B is correct.** **(6.G.A.4)** In this cross-pattern net, square 3 is at the center, with 2 to its left, 4 above, and 5 below. When folded, 2 and 5 (which are on opposite sides of 3 in the net) end up on opposite faces of the cube.
- Choice C is correct.** **(6.SP.A.2)** Question A asks about one dog (one answer). Question B asks about multiple dogs, whose weights vary, requiring data collection—making it statistical.
- The correct answer is A: 6 feet = 72 inches; C: 5 meters = 500 centimeters.** **(6.RP.A.3d)** A is correct: $6 \times 12 = 72$ inches. B is incorrect: $3 \times 16 = 48$ ounces, not 32. C is correct: $5 \times 100 = 500$ cm. D is incorrect: $2 \times 4 = 8$ quarts, not 10. E is incorrect because $4 \text{ km} = 4,000,000 \text{ mm}$, not $400,000 \text{ mm}$.
- Choice D is correct.** **(6.SP.A.2)** IQR = $Q3 - Q1$ measures the spread of the middle 50% of data. A large IQR means those middle values are far apart.
- Choice B is correct.** **(6.SP.B.5c)** With an even number of values, the median is the average of the two middle values (positions 4 and 5 in an 8-value set).
- Choice C is correct.** **(6.SP.B.5c)** IQR = $Q3 - Q1 = 8.5 - 1.5 = 7$.
- Choice A is correct.** **(6.SP.B.4)** Calculate: $(3 \times 5) + (2 \times 6) + (4 \times 7) + (1 \times 8) = 15 + 12 + 28 + 8 = 63$ goals.



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& answers

Author's Note

From a Friend Who Believes in You

Hi, Friend!

◇ I just want to say something important: I am proud of you. You did 6 full practice tests. That takes time, hard work, and heart. ◇

★ **Friendly truth:** a test is just one part of your math journey. You are SO much more than a score. The work you did is the real win! ★

What I Want You to Know

- **You are smart.** Every test you finished proves it.
- **You are brave.** You tried hard problems.
- **You are growing.** Mistakes taught you new things.
- **You are ready.** The skills are inside you.

One more thing: on test day, take a deep breath. Smile. Remember that someone (me!) believes in you. You can do this!

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

Jay Daie

Your Math Friend

PRACTICE TODAY. SUCCEED TOMORROW!

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 6 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

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

6
PRINTED
TESTS

+
2
ONLINE
TESTS

PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ BUILD SKILLS.
GAIN CONFIDENCE.
SUCCEED!

WHAT STUDENTS WILL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts aligned with standards through meaningful practice.



Test Confidence

Become familiar with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

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



2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

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



6 FULL-LENGTH
PRINTED TESTS



2 ONLINE
PRACTICE TESTS



DETAILED ANSWER
EXPLANATIONS