

7 New Hampshire NH SAS

Grade 6 MATH PRACTICE TESTS

7
PRINTED
TESTS

+

2
ONLINE
TESTS

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

Standards-Aligned *Steady Southern*
Problem Solving for Comprehensive
Assessment Program



7 Full-Length
Printed Tests



Standards-Aligned
Math Practice



Detailed Answer Keys
and Explanations



Build Confidence.
Achieve Success.



You've
Got
This!



PREPARE
PRACTICE
SUCCEED



PRACTICE
WITH PURPOSE



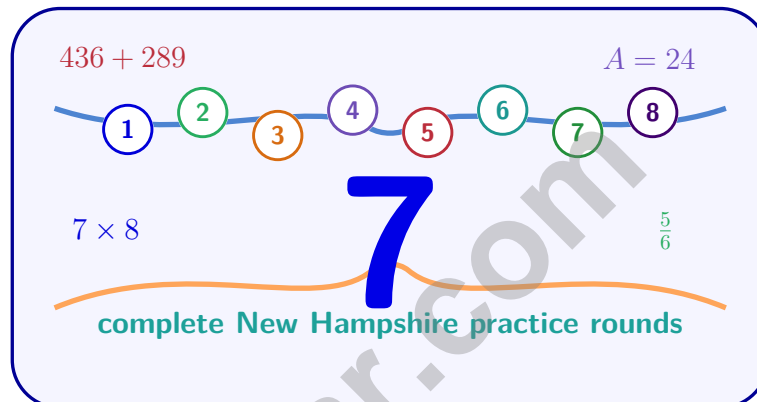
STRENGTHEN
MATH SKILLS



REVIEW, IMPROVE,
AND SUCCEED

7 New Hampshire NH SAS Grade 6 Math Practice Tests

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



Seven 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 seven 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 seven-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 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 7	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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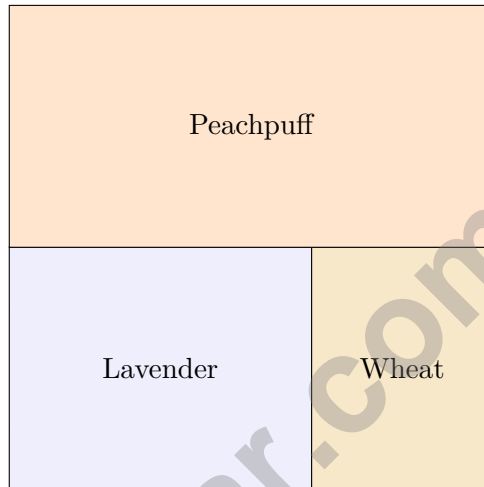
1) A store sells 5 notebooks for \$7.50. What is the price per notebook?

A. \$1.25

C. \$2.50

B. \$1.50

D. \$7.50



2)

A square is chosen at random from the grid. What is the probability that it is wheat-colored?

A. $\frac{3}{32}$

C. $\frac{3}{8}$

B. $\frac{3}{16}$

D. $\frac{1}{2}$

3) A 3-digit number has a stem-and-leaf representation with stem 23 and leaf 5. What is the number?

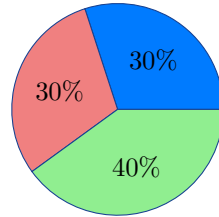
A. 235

C. 253

B. 325

D. 52





4)

A circle graph shows the favorite ice cream flavors of 200 people. If 30% prefer vanilla, how many people prefer vanilla?

- A. 60 C. 30
 B. 50 D. 80

5) A bakery made a stem-and-leaf plot of daily cookie sales: Stem 2: Leaf 1, 3, 5, 8
Stem 3: Leaf 0, 4, 7 Stem 4: Leaf 2, 6

What is the MODE (most frequent value) of the cookie sales?

- A. 30 C. 42
 B. 25 D. No mode

6)



The dots show purple and yellow counters. Express the ratio of purple to yellow in the form $a : b$.

- A. 4 : 5 C. 5 : 9
 B. 9 : 5 D. 5 : 4

7) A game costs \$60. During a sale, it is discounted by 35%. What is the sale price?

- A. \$21 C. \$39
 B. \$25 D. \$45



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8) Solve for x : $3x = 18$

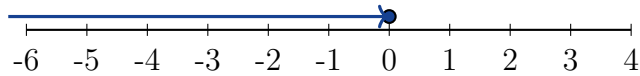
A. $x = 6$

C. $x = 21$

B. $x = 15$

D. $x = 54$

9) Which number line represents $x \leq 0$?



A. Open circle at 0, arrow left

C. Open circle at 0, arrow right

B. Closed circle at 0, arrow right

D. Closed circle at 0, arrow left

10) A polygon has vertices at $(2, 3)$, $(2, 7)$, and $(6, 3)$. What shape is this?

A. Triangle

C. Square

B. Trapezoid

D. Pentagon



1) Which pair of ratios are equivalent?

A. 2 : 3 and 4 : 6

C. 2 : 3 and 4 : 9

B. 2 : 3 and 3 : 6

D. 2 : 3 and 6 : 8

2) An underwater cable is installed at an elevation of -250 meters. A nearby cliff rises to an elevation of 180 meters. How much higher is the cliff than the cable?

A. 70 meters

C. 180 meters

B. 250 meters

D. 430 meters

3) A family has a monthly income of \$3600. They allocate: 35% to rent, 15% to food, 10% to utilities. How much do they have remaining for other expenses?

A. \$1080

C. \$1440

B. \$1260

D. \$1800

4) A scale drawing has a scale of 1 inch = 12 feet. If the actual length of a building is 60 feet, what is its length in the drawing?

A. 4 inches

C. 6 inches

B. 5 inches

D. 7.2 inches

5) Evaluate: $\frac{4}{7} \div \frac{2}{7}$

A. $\frac{8}{49}$

C. $\frac{6}{7}$

B. 2

D. $\frac{2}{14}$



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6) Divide $9,108 \div 52$ and identify the quotient (whole-number part). Round down if there is a remainder.

A. 175

C. 183

B. 180

D. 190

7) Find the LCM of 7 and 11.

A. 18

C. 70

B. 77

D. 88

8) The table below shows pairs of expressions. Which pair represents the same value?

	Expression 1	Expression 2
A.	$4(5 + 7)$	$20 + 27$
B.	$6(3 + 7)$	$18 + 42$
C.	$3(9 + 5)$	$27 + 10$
D.	$2(11 + 6)$	$22 + 11$

A. Choice A

C. Choice C

B. Choice B

D. Choice D

9)



Which number has a greater absolute value, -5 or 3 ?

A. -5 because it is negative

C. -5 because $|-5| = 5$ and $5 > 3$

B. 3 because it is smaller

D. They are equal



1) Evaluate $\frac{1}{2}(a + b)$ when $a = 4$ and $b = 8$.

A. 4

C. 8

B. 12

D. 6

2) The table below shows the cost of renting a canoe.

Hours	2	4	6
Cost (\$)	30	60	90

What is the cost per hour to rent the canoe?

3) A car uses 3 gallons of gas to travel 78 miles. What is the fuel efficiency in miles per gallon?

A. 20 mpg

C. 26 mpg

B. 24 mpg

D. 32 mpg

4) A triangular garden plot has a height of 7 meters and an area of 84 m^2 . What is the base of the triangle?



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5) A student plotted the ratio of length (cm) to width (cm) on a coordinate plane and accidentally swapped the coordinates. The correct pair should be (8, 5). Which point did the student actually plot?

A. (5, 8)

C. (13, 3)

B. (8, 8)

D. (5, 13)

6) Two savings accounts offer simple interest. Account 1: principal \$500, rate 3% per year, time 3 years. Account 2: principal \$500, rate 4% per year, time 2 years. Which account earns more interest?

A. Account 1 by \$15

C. Account 2 by \$10

B. Account 1 by \$5

D. Account 2 by \$5

7) Three vertices of a rectangle are at (2, 3), (8, 3), and (8, 9). What is the area of this rectangle?



8) What is $2 \div \frac{2}{5}$?

A. $\frac{5}{2}$

B. $\frac{2}{10}$

C. $\frac{4}{5}$

D. $\frac{5}{2}$



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

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(6.RP.A.3b)** Unit price: $\$7.50 \div 5 = \1.50 per notebook.
- 2) **Choice C is correct.** **(6.NS.B.3)** Total squares = 64. Wheat squares = $3 \times 8 = 24$. Probability = $\frac{24}{64} = \frac{3}{8}$.
- 3) **Choice A is correct.** **(6.SP.B.4)** With a 2-digit stem (23), the leaf (5) is appended to form the 3-digit number 235.
- 4) **Choice A is correct.** **(6.NS.A.1)** 30% of 200 is $0.30 \times 200 = 60$ people.
- 5) **Choice D is correct.** **(6.RP.A.3)** The data is: 21, 23, 25, 28, 30, 34, 37, 42, 46. Each value appears exactly once, so there is no mode (no repeated value).
- 6) **Choice D is correct.** **(6.RP.A.1)** Count the purple counters first because the question says purple to yellow. There are 5 purple and 4 yellow, so the ratio is 5 : 4.
- 7) **Choice C is correct.** **(6.RP.A.3c)** 35% of \$60 = $0.35 \times 60 = \$21$. Sale price is $\$60 - \$21 = \$39$.
- 8) **Choice A is correct.** **(6.EE.B.5)** Divide both sides by 3: $x = 18 \div 3 = 6$.
- 9) **Choice D is correct.** **(6.EE.B.8)** $x \leq 0$ includes 0 (closed circle) and all numbers less than 0 (arrow points left).
- 10) **Choice A is correct.** **(6.G.A.3)** Three vertices form a triangle, which is a three-sided polygon.
- 11) **Choice A is correct.** **(6.NS.C.8)** The x -coordinate stays -3 . The y -coordinate changes from -4 to 0, an increase of 4 units upward.
- 12) **Choice C is correct.** **(6.RP.A.1)** The area of a circle is πr^2 . Choice B is circumference; choices A and D are incorrect formulas.
- 13) **Choice C is correct.** **(6.RP.A.1)** The upper whisker extends from Q_3 to the maximum, representing the top 25% (the fourth quartile) of the data.
- 14) **Choice D is correct.** **(6.EE.B.8)** "At most" means the maximum is 2,500: $c \leq 2,500$.
- 15) **The correct answer is 6.** **(6.NS.B.3)** A negative divided by a negative is positive, and $18 \div 3 = 6$.
- 16) **Choice D is correct.** **(6.EE.C.9)** Flour used equals 3 cups per batch times the number of batches: $f = 3b$.
- 17) **Choice B is correct.** **(6.G.A.1)** $A = \frac{1}{2} \times 10 \times 5 = 25 \text{ m}^2$.
- 18) **Choice C is correct.** **(6.SP.B.5c)** Split the ordered data into two halves. The lower half is 10, 14, 16, 22, so $Q1 = \frac{14+16}{2} = 15$. The upper half is 24, 26, 30, 35, so $Q3 = \frac{26+30}{2} = 28$. The IQR is $28 - 15 = 13$.
- 19) **Choice D is correct.** **(6.SP.B.4)** Sum the frequencies: $4 + 6 + 5 + 3 = 18$ total data points.
- 20) **Choice C is correct.** **(6.SP.B.5)** Right-skewed distributions have a tail of high values that pull the mean above the median.
- 21) **The correct answer is Gains are positive (B is correct), and debts/losses are negative (D is correct).** **Choice A incorrectly represents a loss as positive. Choice C is false because breaking even is represented by 0. Choice E is false..** **(6.NS.C.5)** Choice B correctly shows that a gain is positive. Choice D correctly shows that a debt (owed amount) is negative. Choice A misrepresents loss as positive; losses should be negative. Choice C is incorrect because breaking even is represented by 0, not +1. Choice E is incorrect because losses are represented by negative integers, which are less than zero.
- 22) **Choice A is correct.** **(6.RP.A.3a)** On the graph with gallons on the x -axis and plants on the y -axis, the point (1, 4) means 1 gallon (x -value) corresponds to 4 plants watered (y -value). This shows the unit rate: 4 plants per gallon.
- 23) **The correct answer is 35.** **(6.EE.A.2a)** Add 15 to 20: $20 + 15 = 35$.
- 24) **Choice A is correct.** **(6.NS.C.7d)** Savings: 20% of \$150 = $0.20 \times 150 = \$30$.
- 25) **Choice C is correct.** **(6.RP.A.3)** Multiply: $5 \times 2 = 10$ feet.



Hi, Math Champion!

◇ Look what you did! 7 full practice tests. That's hundreds of math problems. You started as a learner. You are now a math athlete. ◇

★ **Champions know:** hard work pays off. You did the hard work. Your math skills are strong because you practiced. ★

Champion's Stats

- **Focus:** HIGH! You stay on task.
- **Speed:** STRONG! You move at the right pace.
- **Accuracy:** SHARP! You catch your own mistakes.
- **Mindset:** CHAMPION! You believe in yourself.

Champion tip: on test day, walk in proud. You trained for this. You are ready!

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

Jay Daie

Your Math Coach

MASTER 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 7 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.



PERFECT FOR:

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

★ PRACTICE TODAY.
SUCCEED TOMORROW.

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.



7 FULL-LENGTH
PRINTED TESTS



STANDARDS-
ALIGNED PRACTICE



DETAILED ANSWER
KEYS & EXPLANATIONS