

3

New Hampshire

NH SAS

GRADE 3

MATH PRACTICE TESTS

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Standards-Aligned
Practice for Stronger
Math Skills and
Test Readiness



Build Confidence
with Targeted Practice

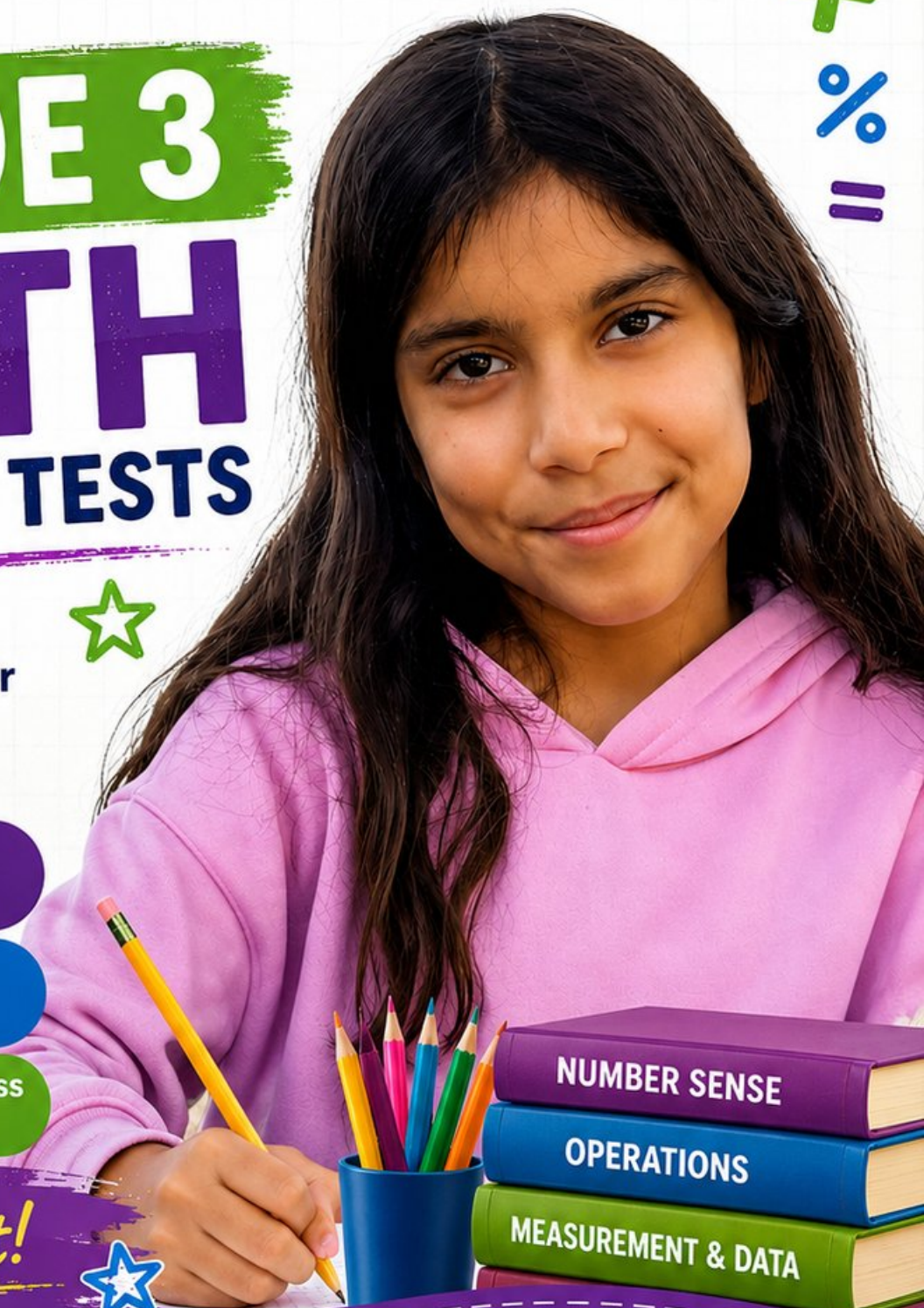


Strengthen Skills
in Key Math Concepts



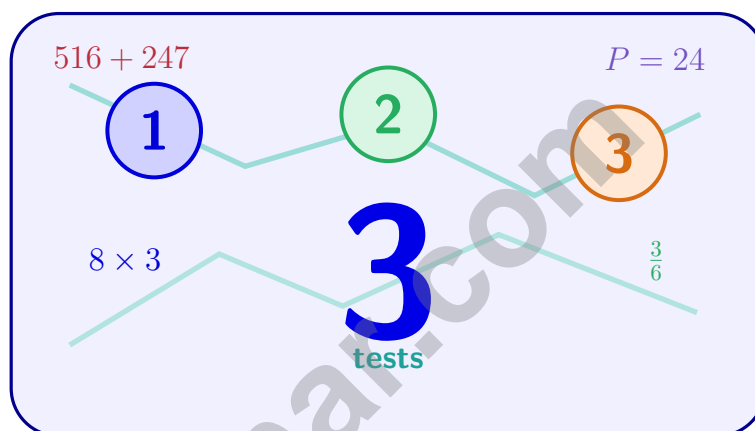
Improve Test Readiness
with Realistic Practice

Be Ready.
Do Your Best!



3 New Hampshire NH SAS Grade 3 Math Practice Tests

Standards-Aligned Practice for Stronger Math Skills and Test Readiness



Three 30-question trail tests packed with Grade 3 review, New Hampshire NH SAS strategy tips, answer keys, and step-by-step explanations that turn every miss into the next move.

Jay Daie and Reza Nazari



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Welcome to the New Hampshire Math Trail

Three tests, one trail, and a stronger Grade 3 thinker at the end



To the Grade 3 Trail Scout

This book is your practice trail for the New Hampshire NH SAS. You will multiply and divide, read graphs, work with fractions, measure time, find area, and explain your thinking – one trail marker at a time.

Some problems will feel quick, like a clear stretch of wide open trail. Some will ask you to slow down, draw, count, or try again. That slow part is where strong math grows. Every page gives your brain another chance to spot, choose, and build.

Spot

Read carefully and find what the problem is really asking.

Sketch

Use numbers, arrays, number lines, or labels to make your thinking visible.

Signal

Check that your answer makes sense before you wave the next question on.

Trail promise: I will read like a tracker, sketch like a planner, and check like a careful scout. I do not have to be perfect to keep moving forward.

How to Use This Book

A four-step trail plan that turns practice into progress

Step 1: Pack Your Pack

Read the Quick Review first.
Wake up the Grade 3 ideas you will need before you set foot on the trail.

Step 2: Hit the Trail

Take one full test.
Thirty questions. Pencil sharp, work shown, calm pace – one marker at a time.

Step 3: Campfire Check

Check answers honestly.
Circle missed questions. Star any problem that felt confusing – those are tomorrow’s clues.

Step 4: Track Back

Fix a few mistakes.
Read the explanation, rework the problem, and carry that lesson up the next stretch of trail.

A Three-Week Trail Plan

Week 1	Hike Test 1. Map what feels strong and what needs a second look.
Week 2	Hike Test 2. Sharpen the habits: read slow, sketch the model, label every number.
Week 3	Hike Test 3. Bring everything – facts, models, checks, and calm focus.

Best trail habit: Do not only ask, “What did I score?” Ask, “What did I learn how to do better?”



Test Overview

What waits on the trail and what each practice test builds

Each practice test has 30 questions. Together they walk you through the kind of math thinking the New Hampshire NH SAS asks Grade 3 students to use: read carefully, choose a strategy, show work, and check whether an answer makes sense.

Selected-Response Questions

Pick the best answer from the choices. Strong scouts estimate first, cross out answers that cannot be right, and reread the question before circling.

Open-Ended Questions

Write the answer and show the thinking. A clear response uses neat numbers, helpful labels, and a short model or explanation.

Grade 3 Ideas You Will Meet on the Trail

- multiplication, division, arrays, equal groups, and fact fluency
- rounding, adding, subtracting, and multiplying by multiples of 10
- fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shapes
- two-step word problems and explaining a solution path

What strong NH SAS work looks like: the scout reads the whole problem, picks a sensible strategy, writes numbers neatly, labels the answer, and checks that the answer truly fits the question.



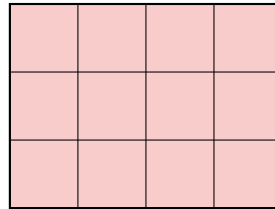
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1) A teacher has 24 crayons and 8 students. She shares the crayons equally. How many crayons does each student get? Which multiplication fact helps you solve this?

- A. $8 \times 3 = 24$ (each student gets 3 crayons) C. $6 \times 4 = 24$ (wrong number of students)
 B. $8 \times 4 = 32$ (too many crayons) D. $8 + 3 = 11$ (adding, not dividing)



2)

Use the grid to find the area. How many unit squares cover the rectangle?

- A. 10 unit squares C. 12 unit squares
 B. 11 unit squares D. 14 unit squares

3) Mia tiles a rectangle that is 3 tiles wide and 6 tiles tall. Jordan tiles a rectangle that is 2 tiles wide and 9 tiles tall. Whose rectangle has a bigger area?

- A. Mia's rectangle C. They have the same area
 B. Jordan's rectangle D. Cannot tell from this information

4) A bakery put 8 cupcakes in each box. If they fill 5 boxes, how many cupcakes are there?

- A. 35 cupcakes (swaps factors: 5×7 instead of 5×8) C. 45 cupcakes (adds $8 + 5 + 32$)
 B. 13 cupcakes (adds $8 + 5$) D. 40 cupcakes

5) How many odd numbers are in the pattern 4, 8, 12, 16, 20, 24, 28? Explain why.



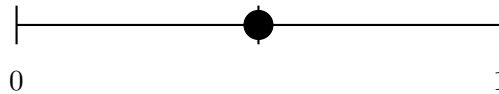
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6) A bar graph shows a scale where each unit represents 2 items. If we want to show 12 items, how many units tall should the bar be?

- A. 2 units
 B. 4 units

- C. 6 units
 D. 12 units

7) A point is marked on a number line from 0 to 1 with 2 equal parts. The point is at $\frac{1}{2}$. Which statement is true?



- A. It is closer to 0 than 1
 B. It is closer to 1 than 0

- C. It is halfway between 0 and 1
 D. It is at 0

8) Sam's classroom has 4 tables arranged in rows. Each table seats 7 students. How many students can sit at the tables?

- A. 28
 B. 11

- C. 21
 D. 35

9) Which fraction is equivalent to $\frac{2}{4}$?

- A. $\frac{2}{3}$
 B. $\frac{3}{4}$

- C. $\frac{1}{2}$
 D. $\frac{2}{8}$

10) Find $6 \times 5 + 6 \times 3$.



1) Noah buys three items at the store. Tomatoes weigh 1 kg, bread weighs 600 g, and cheese weighs 400 g. What is the total mass in grams?

A. 1000 g

B. 1600 g

C. 2000 g

D. 2600 g

2) Which multiplication fact helps you solve $32 \div 8$?

A. $4 \times 8 = 32$

B. $5 \times 8 = 40$

C. $8 \times 8 = 64$

D. $3 \times 8 = 24$

3) Round 351 to the nearest 100.

A. 300

B. 350

C. 351

D. 400

4) Write a fraction equivalent to $\frac{1}{2}$.



Parallel

5)

The shape shows two sides that are parallel. If this is a rectangle, which other pair of sides is also parallel?

A. The left and right sides

B. The diagonal sides

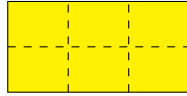
C. Only one pair in a rectangle

D. No other sides are parallel



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6)



This rectangle is divided into equal parts. How many parts are there?

- A. 8 parts C. 5 parts
 B. 4 parts D. 6 parts

7) The shape shows all its parts shaded. What fraction is this?



- A. $\frac{1}{2}$ C. $\frac{1}{1}$
 B. $\frac{2}{1}$ D. $\frac{2}{2}$

8) A rectangle has length 7 units and width 3 units. What is its perimeter?

- A. 10 units C. 28 units
 B. 21 units D. 20 units

9) Mia divides 1 cookie equally among 3 friends. What fraction does each friend get? Which fraction is equivalent?

- A. $\frac{1}{3}$ and $\frac{2}{6}$ C. $\frac{1}{2}$ and $\frac{2}{4}$
 B. $\frac{1}{4}$ and $\frac{2}{8}$ D. $\frac{3}{6}$ and $\frac{1}{2}$



1) Two different rectangles both have areas of 16 square units. Which pair of dimensions is NOT possible?

A. 4×4

C. 3×5

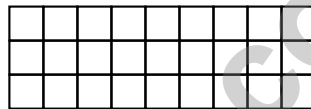
B. 2×8

D. 1×16

2) Which is greater: $\frac{1}{2}$ or $\frac{1}{4}$?



3) Eli's rectangular carpet is 9 units long and 3 units wide. Here is the grid:



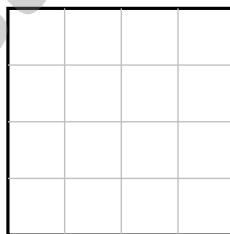
Count all the unit squares. What is the area?

A. 12 sq units (just the edge)

C. 27 sq units

B. 18 sq units

D. 36 sq units



4 units

4) 4 units

What is the area of this square?

A. 8 sq units

C. 12 sq units

B. 16 sq units

D. 20 sq units



5) Eli is on a number line divided into sixths. He hops forward by unit sixths: $\frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}, \frac{5}{6}, \frac{6}{6}, \frac{7}{6}, \dots$. At what point does he say $\frac{12}{6}$?

A. At 1

C. At 3

B. At 2

D. Beyond 3

6) Which number rounds to 70 when rounded to the nearest 10?

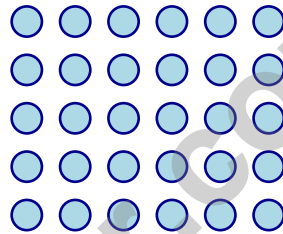
A. 64

C. 75

B. 76

D. 67

7) Look at this array. Count the objects.



5 rows with 6 objects in each row

A. 25 objects

C. 30 objects

B. 28 objects

D. 36 objects

8) Which property of multiplication helps you solve 8×3 by thinking about $8 \times 2 + 8 \times 1$?

A. Commutative

C. Identity

B. Associative

D. Distributive



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Practice Test Answer Keys

How to use this section with a Grade 3 student:

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

A calm correction routine builds stronger math habits.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(3.OA.B.6)** This problem requires division: $24 \div 8 = \square$. We use the unknown-factor strategy: $\square \times 8 = 24$. The multiplication fact $8 \times 3 = 24$ tells us each student gets 3 crayons. We find the missing factor using multiplication.
- Choice C is correct.** **(3.MD.C.5a)** The rectangle is $4 \times 3 = 12$ unit squares.
- Choice C is correct.** **(3.MD.C.7a)** Mia: $3 \times 6 = 18$ square units. Jordan: $2 \times 9 = 18$ square units. Different dimensions, same area—shows that tiling result depends on both dimensions, not just one.
- Choice D is correct.** **(3.OA.A.1)** 5 boxes with 8 cupcakes each means 5 groups of 8. So $5 \times 8 = 40$ cupcakes.
- The correct answer is 0.** **(3.OA.D.9)** All numbers in this pattern are even because we're multiplying 4 (an even number) by 1, 2, 3, etc. Since 4 is even, every multiple of 4 is even. There are no odd numbers.
- Choice C is correct.** **(3.MD.B.3)** Divide the total by the scale: $12 \div 2 = 6$ units tall.
- Choice C is correct.** **(3.NF.A.2)** $\frac{1}{2}$ divides the distance into two equal parts, so it is exactly in the middle.
- Choice A is correct.** **(3.OA.A.3)** Multiply: 4 tables \times 7 students per table = 28 students.
- Choice C is correct.** **(3.NF.A.3a)** $\frac{2}{4}$ simplifies to $\frac{1}{2}$. They represent the same region: one-half.
- The correct answer is 48.** **(3.OA.B.5)** $6 \times 5 = 30$ and $6 \times 3 = 18$, so $30 + 18 = 48$.
- Choice D is correct.** **(3.OA.D.8)** Step 1: Find the new stickers: $3 \times 8 = 24$. Step 2: Add to her original: $24 + 24 = 48$ stickers. (Choice A is just the original amount; choice B is step 1 only.)
- Choice A is correct.** **(3.NBT.A.1)** Numbers from 250 to 349 round to 300. Choice A (249) has tens digit $4 < 5$, so it rounds to 200, not 300. The other choices are all within the range 250–349.
- Choice A is correct.** **(3.NBT.A.2)** Lily has 326. Her friend gives 147. Add: $326 + 147 = 473$. Ones: $6 + 7 = 13$ (write 3, carry 1). Tens: $2 + 4 + 1 = 7$. Hundreds: $3 + 1 = 4$.
- Choice C is correct.** **(3.MD.C.5b)** Count the rows: 2 rows. Count across: 11 unit squares per row. Total: $11 + 11 = 22$ square units.
- Choice D is correct.** **(3.OA.C.7)** $5 \times 8 = 40$ is correct. The others: $6 \times 7 = 42$, $9 \times 5 = 45$, $7 \times 6 = 42$.
- Choices A and D are correct.** **(3.NF.A.3)** $\frac{2}{8}$ and $\frac{1}{4}$ both name one-fourth of a whole. The other choices are not equivalent to $\frac{1}{4}$.
- Choice B is correct.** **(3.MD.C.7d)** Find each rectangle: top is $5 \times 3 = 15$ sq m; bottom is $4 \times 2 = 8$ sq m. Total: $15 + 8 = 23$ sq m.
- Choice C is correct.** **(3.MD.A.1)** $2 : 18 + 22 \text{ min} = 2 : 40 \text{ PM}$.
- Choice B is correct.** **(3.NF.A.3b)** Multiply numerator and denominator by 2: $\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$.
- The correct answer is 32 square units.** **(3.MD.C.7c)** $5 + 3 = 8$, and $4 \times 8 = 32$ square units.
- Choice C is correct.** **(3.MD.C.7b)** Area = length \times width = $8 \times 5 = 40$ square meters.
- Choice B is correct.** **(3.G.A.2)** Two horizontal and two vertical lines create 6 equal parts, not 4.
- Choice C is correct.** **(3.MD.C.7)** $3 \times 8 = 24$ and $4 \times 6 = 24$. Choice A: 20 and 21. Choice B: 25 and 24. Choice D: 18 and 16.
- Choice C is correct.** **(3.MD.B.4)** The mode is the value with the most X's. At $16\frac{1}{2}$, there are 3 X's, which is more than any other value.
- Choice B is correct.** **(3.NF.A.2a)** Option B has equal spacing. Option A is unequal; distances differ.
- Choice D is correct.** **(3.NF.A.2b)** Point U is at position 1 on the number line. Since the line is divided into fourths, this position is the 4th fourth-mark: $\frac{4}{4} = 1$.
- Choice D is correct.** **(3.OA.A.2)** $15 \div 3 = 5$ because $3 \times 5 = 15$. There are 5 groups of 3 in 15, not 4.
- Choice B is correct.** **(3.NF.A.3d)** CRITICAL: Fraction comparisons are ONLY valid when both fractions describe the same-size whole. Since pizza B is bigger than pizza A, $\frac{1}{4}$ of the smaller pizza may actually be bigger than $\frac{1}{6}$ of the larger pizza. We cannot compare them. Standard 3.NF.A.3.d requires recognizing that comparisons are valid only when the two fractions refer to the same whole.



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A Quiet Word From Your Mentor

Hi, Thoughtful Student,

◇ I want to take a moment to tell you something true: you did excellent work. 3 practice tests is a real promise that you kept to yourself. That matters. ◇

★ **Mentors notice:** growth is quiet. It doesn't shout. But it shows up in how you handle a problem today vs how you did weeks ago. That growth is your real prize. ★

What I See in You

- **Hard Work:** You don't quit when problems are tough.
- **Curiosity:** You wonder why and how.
- **Kindness:** You are patient with yourself.
- **Brave Heart:** You try things that scare you.

Mentor's note: on test day, treat yourself like you would a friend. Be kind. Be patient. Be encouraging. The skills are inside you!

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

Jay Daie

Your Math Mentor

3 GRADE 3 MATH PRACTICE TESTS

Practice Today. *Succeed* Tomorrow!



Give your child the tools to build strong math skills and test confidence!

This book includes 3 full-length Grade 3 Math practice tests that mirror real test formats and cover all key math standards. With a wide range of question types and real-world problems, students will gain the practice and confidence they need to do their best!

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