

4

New Hampshire NH SAS

Grade 3

MATH

PRACTICE TESTS

Standards-Aligned Practice



STANDARDS-ALIGNED

Practice to build skills and boost confidence



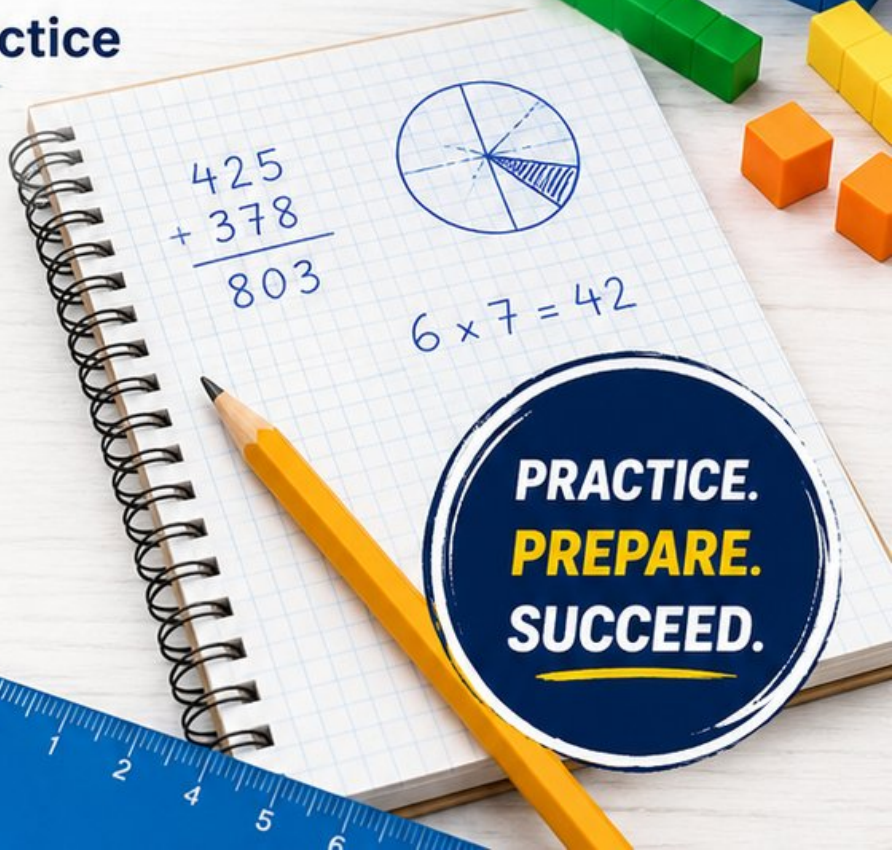
4 FULL-LENGTH TESTS

Realistic questions to prepare for test day

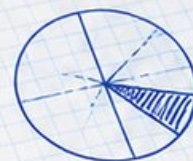


ANSWER KEYS & EXPLANATIONS

Detailed solutions to learn and improve



$$\begin{array}{r} 425 \\ + 378 \\ \hline 803 \end{array}$$

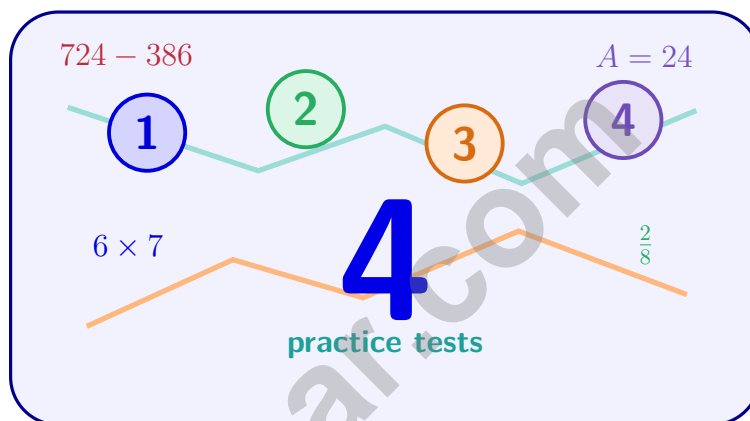


$$6 \times 7 = 42$$

PRACTICE.
PREPARE.
SUCCEED.

4 New Hampshire NH SAS Grade 3 Math Practice Tests

Standards-Aligned Review with Mixed Practice and Answer Key



Four focused 30-question missions for Grade 3 math: number facts, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome to the New Hampshire Math Launch

Four missions, careful work, and a stronger Grade 3 thinker



Read the mission. Show the work. Check the answer. Launch again.

To the Grade 3 Mission Leader

This book is a four-mission practice launch for the New Hampshire NH SAS. Each test gives you a fresh chance to multiply, divide, read graphs, compare fractions, measure, find area, and explain math in a way someone else can follow.

New Hampshire has granite hills, forest paths, and crisp mornings made for clear thinking. Good math uses the same habit: pause, check the details, and move forward with a steady plan.

Notice

Find the numbers, units, and question before choosing a path.

Model

Draw an array, number line, table, or quick equation.

Verify

Ask whether your answer fits the story and the unit.

Launch promise: I will slow down at the important moments, show the work I can, and use every miss as a clue for the next mission.

How to Use This Book

A four-mission routine for steady Grade 3 growth

1. Warm Up the System

Read the review pages first. Remind your brain how equal groups, fractions, clocks, graphs, and area models work.

2. Fly One Mission

Take one complete 30-question test. Keep your work neat enough that you can check it later.

3. Review the Flight

Use the answer key, then pause. A wrong answer is useful when you can name what happened.

4. Repair and Relaunch

Rework a few missed questions before starting the next test. The repair step is where the score begins to move.

A Four-Session Plan

| | |
|------------------|---|
| Session 1 | Take Test 1 and mark the topics that need attention. |
| Session 2 | Take Test 2 and focus on showing every step clearly. |
| Session 3 | Take Test 3 and watch for units, labels, and two-step problems. |
| Session 4 | Take Test 4 and finish with calm, careful checking. |

Best mission habit: After checking answers, write one sentence: “Next time I will pay attention to _____.”



Test Overview

What each Grade 3 math mission asks you to do

Each practice test has 30 questions. Across four tests, you will practice the kind of Grade 3 math thinking used on the New Hampshire NH SAS: reading carefully, choosing a strategy, doing accurate computation, and explaining enough work to make your answer clear.

Multiple Choice

Look for the best answer. Estimate first when you can, cross out choices that do not fit, and reread the question before you choose.

Open Response

Write the answer and show the reason. A good Grade 3 response may use a drawing, equation, table, number line, or a few clear words.

Math Ideas Inside the Four Tests

- multiplication, division, arrays, missing factors, and two-step word problems
- place value, rounding, addition, subtraction, and multiplying by tens
- unit 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 shape categories

What strong NH SAS work looks like: the answer matches the question, the units make sense, and the work is clear enough to check.



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- 6) If you want to measure the area of a wall, which is the best unit to use?
- A. Inches (like the perimeter) C. Feet (the height or length)
 B. Square feet (space covered) D. Miles (for large distances)
- 7) Ava colored $\frac{4}{4}$ of a shape. Noah colored $\frac{4}{6}$ of a shape of the same size. Which statement is true?
- A. Ava colored more C. They colored the same amount
 B. Noah colored more D. Cannot compare the fractions
- 8) The pattern for multiples of 6: 6, 12, 18, 24, 30, 36.
What is the rule?
- A. Add 5 each time C. Double the number
 B. Skip count by 2 D. Add 6 each time
- 9) A line plot shows seashell lengths in inches: 3, $3\frac{1}{4}$, $3\frac{1}{2}$, $3\frac{3}{4}$. The sum of X's at 3 and $3\frac{1}{4}$ is 5. The sum at $3\frac{1}{2}$ and $3\frac{3}{4}$ is 3. If there are 2 shells at 3 inches, how many are at $3\frac{1}{4}$ inches?
- A. 2 C. 4
 B. 3 D. 5
- 10) Find $7 \times 9 + 5$.



1) A pie is cut into 4 equal slices. Sam eats one slice, and Mia eats one slice. How much pie is left as a fraction?

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

- C. $\frac{1}{4}$
 D. $\frac{2}{1}$

2) Which expression does NOT equal 20?

- A. 4×5
 B. 5×4

- C. $10 + 10$
 D. 3×6

3) Lily wrote these four facts about the same numbers. Which one does NOT belong in the fact family?

- A. $36 \div 6 = 6$
 B. $9 \times 4 = 36$

- C. $36 \div 9 = 4$
 D. $4 \times 9 = 36$

4) Skip count by 6: 6, 12, 18, 24, 30, 36.

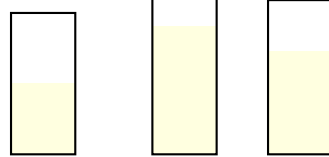
What is the next number?

- A. 40
 B. 41

- C. 42
 D. 48

Three Containers

Container A Container B Container C



250 mL 500 mL 400 mL

5)

Which container holds the least amount of liquid?

- A. Container A
 B. Container B

- C. Container C
 D. All hold the same



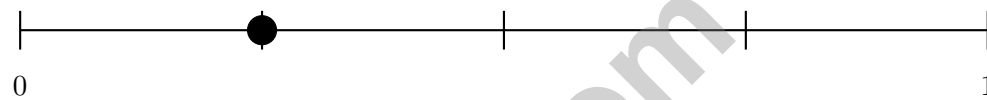
6) Lily's sandbox is a square with sides of 5 feet. How many square feet is the sandbox?

- A. 10 sq ft C. 25 sq ft
 B. 20 sq ft D. 30 sq ft

7) How many unit squares (1 in. \times 1 in.) cover a 3 in. by 6 in. rectangle?

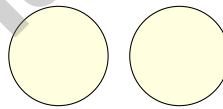
- A. 9 unit squares C. 18 unit squares
 B. 12 unit squares D. 24 unit squares

8) On a number line from 0 to 1 split into 4 equal parts, the distance from 0 to $\frac{1}{4}$ is what part of the whole line?



- A. $\frac{1}{4}$ of the line C. $\frac{3}{4}$ of the line
 B. $\frac{2}{4}$ of the line D. The whole line

9) The shaded circles show $\frac{2}{1}$. Which picture matches?



Two whole circles

- A. Two circles, one shaded C. Two circles, both fully shaded
 B. One circle shaded D. One circle divided in half

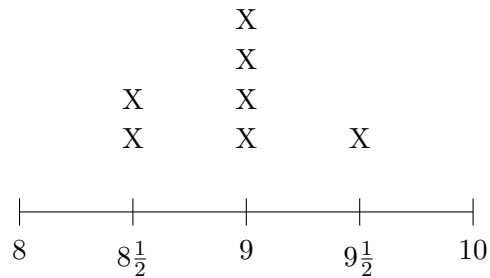
10) Ava's piano lesson is at 3 : 52 PM. She needs to arrive 8 minutes early. What time should Ava arrive?

- A. 3 : 44 PM C. 4 : 00 PM
 B. 3 : 45 PM D. 3 : 40 PM



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1) A line plot displays insect body lengths in millimeters: $8, 8\frac{1}{2}, 9, 9\frac{1}{2}, 10$.

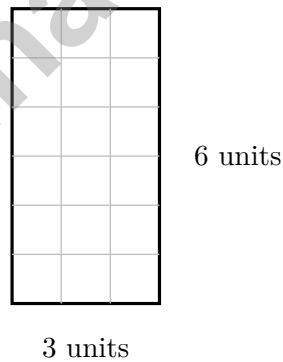


How many insects are longer than $8\frac{1}{2}$ millimeters?

- A. 3
- B. 4
- C. 5
- D. 6

2) $? - 187 = 256$. What is the missing minuend?

- A. 433
- B. 413
- C. 444
- D. 443



3)

Count the unit squares. What is the area?

- A. 9 sq units
- B. 18 sq units
- C. 12 sq units
- D. 36 sq units



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4) Write a fraction equivalent to $\frac{3}{6}$.

5) Which picture shows 10 items divided equally into 2 groups?

A. Two groups of five



B. Five groups of two



C. Ten groups of one



D. Five groups of ten



6) A shape is made of two rectangles. Rectangle 1 has area 12 sq units, and Rectangle 2 has area 15 sq units. What is the total area?

A. 15 sq units

C. 27 sq units

B. 24 sq units

D. 180 sq units

7) Round 608 to the nearest 10.

A. 600

C. 610

B. 608

D. 700



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 turns every missed item into useful practice.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(3.MD.B.3)** Divide total by scale: $12 \div 4 = 3$ icons.
- Choice D is correct.** **(3.MD.C.6)** Area of a square = $9 \times 9 = 81$ square inches.
- Choice C is correct.** **(3.MD.C.7c)** Adding the numbers instead of multiplying does not use the distributive property or find the area correctly.
- Choice D is correct.** **(3.OA.B.6)** $32 \div 4 = \square$ means $\square \times 4 = 32$. Since $8 \times 4 = 32$, each box has 8 cars.
- Choice D is correct.** **(3.G.A.1)** A rectangle with length 5 cm and width 3 cm has two different side lengths and 4 right angles. A rhombus with all sides 5 cm has equal sides but may not have right angles. Different properties mean different shapes.
- Choice B is correct.** **(3.MD.C.5)** Area must be measured in square units because it describes 2D space. Square feet, square inches, square meters, and square centimeters are all correct area units.
- Choice A is correct.** **(3.NF.A.3d)** Ava colored one whole because $\frac{4}{4} = 1$. Noah colored less than one whole, so $\frac{4}{4} > \frac{4}{6}$.
- Choice D is correct.** **(3.OA.D.9)** From 6 to 12 is +6; from 12 to 18 is +6. The constant difference is 6.
- Choice B is correct.** **(3.MD.B.4)** Sum at 3 and $3\frac{1}{4}$ is 5. If 2 are at 3 inches, then $5 - 2 = 3$ are at $3\frac{1}{4}$ inches.
- The correct answer is 68.** **(3.OA.D.8)** $7 \times 9 = 63$, and $63 + 5 = 68$.
- Choice D is correct.** **(3.OA.A.4)** Divide: $42 \div 6 = 7$ marbles per bag. Check: $6 \times 7 = 42$.
- Choice B is correct.** **(3.NF.A.2b)** On a 0-to-1 line, $\frac{3}{4}$ is at the 3rd mark (distance 0.25 from 1), while $\frac{1}{4}$ is at the 1st mark (distance 0.75 from 1). So $\frac{3}{4}$ is much closer.
- Choices B and E are correct.** **(3.OA.B.5)** This problem shows the associative property. When you group factors differently, like $(4 \times 6) \times 2$ or $4 \times (6 \times 2)$, you still get the same product. Option B states the name correctly, and E restates what associative means. A is commutative (switching order), C is distributive (breaking apart a sum), and D relates to multiplying by 1.
- Choice B is correct.** **(3.NF.A.3b)** Multiply numerator and denominator by 2: $\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$.
- Choice C is correct.** **(3.MD.C.5a)** A unit square with side 1 m has area $1 \text{ m} \times 1 \text{ m} = 1 \text{ m}^2 = 1$ square meter.
- Choice C is correct.** **(3.MD.C.5b)** $4 \times 4 = 16$ unit squares, area is 16 square units.
- Choice B is correct.** **(3.MD.A.1)** $1 : 16 + 29 \text{ min} = 1 : 45 \text{ PM}$.
- Choice A is correct.** **(3.OA.A.3)** Divide: $20 \div 4 = 5$ cars per row.
- Choice C is correct.** **(3.MD.C.7a)** Tall rectangle: $3 \times 8 = 24$ square units. D is concatenation error.
- Choice C is correct.** **(3.NF.A.2)** $\frac{7}{8}$ means 7 out of 8 equal parts, which is the seventh tick mark from 0.
- Choice D is correct.** **(3.NBT.A.1)** The point is at position 1 on the line from 0 to 10, representing a number like 8–14 closer to 10.
- Choice A is correct.** **(3.NBT.A.2)** Ones: $2 - 8$ requires regrouping, so $12 - 8 = 4$. Tens: $9 - 1 = 8$ (after regrouping). Hundreds: $8 - 4 = 4$. Answer: 484.
- Choice D is correct.** **(3.NF.A.2a)** Eighths are the smallest pieces listed, so the first tick at $\frac{1}{8}$ is closest to 0.
- Choice C is correct.** **(3.MD.C.7)** A square with side 5 has area $5 \times 5 = 25$ square meters.
- The correct answer is $\frac{1}{4}$.** **(3.NF.A.1)** One piece out of 4 equal pieces is $\frac{1}{4}$.
- Choice C is correct.** **(3.NF.A.3)** Both bars show the same shaded amount. $\frac{1}{4}$ and $\frac{2}{8}$ are equivalent.
- The correct answer is 34 square units.** **(3.MD.C.7d)** Part 1: $8 \times 3 = 24$ sq units. Part 2: $5 \times 2 = 10$ sq units. Total: $24 + 10 = 34$ sq units.
- Choice C is correct.** **(3.MD.A.2)** Add: $5 + 2 = 7$ kg.
- Choice C is correct.** **(3.NBT.A.3)** $2 \times 8 = 16$, then multiply by 10: $2 \times 80 = 160$. You multiply the single digits first, then add one zero.
- Choice B is correct.** **(3.NF.A.3c)** Any whole number n equals $\frac{n}{1}$. So $6 = \frac{6}{1}$.



Inventor's Workshop Note

Hi, Math Inventor!

◇ 4 practice tests. 4 chances to invent new ways to think. You tried things. You changed them. You made your math brain stronger! ◇

★ **Inventors know:** the first try isn't always the best try. Sometimes you fix it. Sometimes you start over. You did all of that! ★

Inventor's Workshop

- **Sketch Pad:** Full of ideas!
- **Toolbox:** Lots of math strategies.
- **Workbench:** Neat and organized.
- **Brave Mind:** You try new things.

Inventor tip: on test day, if your first try doesn't work, switch tools. Inventors don't get stuck on one tool. Pick the right one for the job!

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

Jay Daie

Your Math Inventor

Build Skills. Achieve More.

This book gives **Grade 3** students the focused practice they need to master math concepts with confidence.

What's Inside?



Standards-Aligned Practice

Questions designed to match Grade 3 math standards.



Variety of Question Types

Build skills with multiple formats and challenges.



Real-World Applications

Engaging problems that connect math to life.



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Track improvement and see growth over time.



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- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
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- ✓ And More!



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