

4

COMPLETE

South Dakota

Smarter Balanced

Grade

MATH

5

PRACTICE TESTS

Standards-Based Test Prep with
Mixed Review, Word Problems,
and **Full Answer Key**



- ✓ **4 COMPLETE PRACTICE TESTS**
Built to reflect the test format and rigor



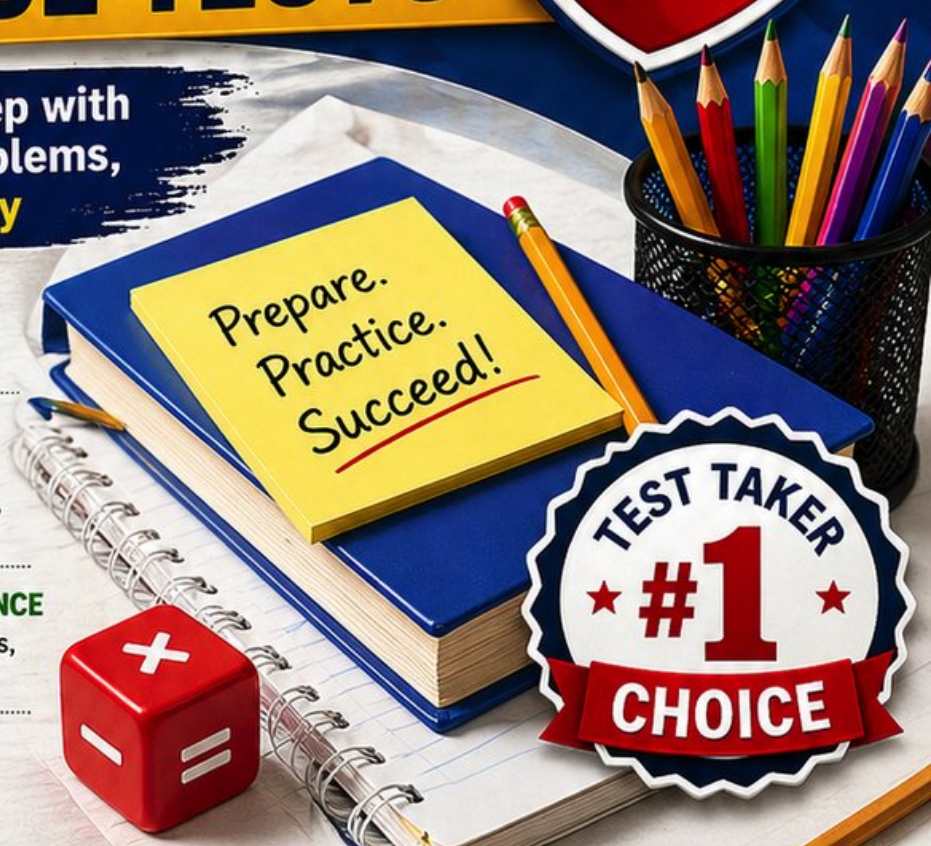
- ✓ **COVERS ALL ESSENTIAL TOPICS**
Numbers & Operations, Fractions, Decimals, Geometry, Measurement, Data & Probability, and more



- ✓ **STRENGTHEN SKILLS & CONFIDENCE**
Mixed review, challenging questions, and strategic practice



- ✓ **FULL ANSWER KEY INCLUDED**
Detailed explanations for every question



BUILD STRONG MATH SKILLS & TEST READINESS



IMPROVE ACCURACY, SPEED, AND PROBLEM SOLVING



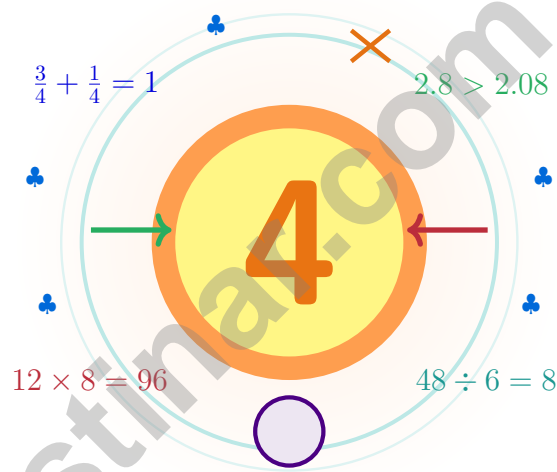
PERFECT FOR CLASSROOM, HOME, OR SELF-STUDY



ALIGNED TO SOUTH DAKOTA STATE STANDARDS (SMARTER BALANCED)

4 South Dakota Smarter Balanced Grade 5 Math Practice Tests

Four full tests, four lessons, one stronger mathematician



Four full tests, a smart quick review, mission-style strategy pages, and student-tested support that help Grade 5 mathematicians from The Mount Rushmore State build calm, careful, confident habits.

Jay Daie and Reza Nazari



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Welcome to the Math Mission, South Dakota

Four chances to read carefully, solve smartly, and grow stronger

Mission Briefing for Grade 5 Math Crew of South Dakota

This book gives you four chances to read closely, solve carefully, and level up your math thinking. Math is like Mount Rushmore – big results come from small careful chips, day after day.

You do not need to feel perfect before you begin. You just need to stay curious, use strategies, and learn from every correction. That is how confident mathematicians are built.

See

See the whole problem
before you start the
math.

Plan

Plan one careful step
before the next.

Reflect

Reflect after each
problem to lock the
lesson in.

A strong mission habit for South Dakota: keep your work neat, estimate when it helps, label units carefully, and never let one hard question decide your mood for the whole page.

How to Use This Book

A four-step routine that turns practice into real improvement

Step 1: Set Up

Pencil ready, distractions gone.

Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Work the Test

Take a full test like the real day.

Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Look Back

Walk through your answers without rushing.

Circle missed questions, sort out what went sideways, and notice which skills are calling for attention.

Step 4: Climb Higher

Pick one or two skills to sharpen next.

Read the explanation, fix the work, and carry that lesson into the very next test.

A Four-Week South Dakota Mission Map

Week	Mission Focus
Week 1	Take Test 1 like a careful first chip on stone.
Week 2	Take Test 2 and aim attention at word problems and step-showing.
Week 3	Take Test 3 to polish fractions, decimals, and conversions.
Week 4	Take Test 4 and reveal the shape with calm, confident final chips.



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Test Overview

What these four practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Mount Rushmore State for the South Dakota Smarter Balanced with the steady focus of a long carving day. The goal is bigger than collecting right answers. Students are practicing how to read carefully, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every day.

Selected-Response Questions

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

Constructed-Response Questions

Students show steps, explain a method, or support an answer with clear math. Strong reasoning matters because it shows how the answer was found.

Grade 5 Ideas That Show Up Again and Again

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, mixed numbers, and decimals
- perimeter, area, volume, and measurement conversions
- tables, line plots, patterns, and coordinate points
- geometry and multi-step real-world problem solving

What strong Smarter Balanced-style work looks like: accurate math, readable steps, the right labels or units, and a final answer that really matches the question being asked.



Table of Contents

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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

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

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

1 hour (hr) = 60 minutes (min) 1 year = 12 months

1 day = 24 hours (hr) 1 year = 52 weeks



1) Tile Pattern in Rectangles:



Fig 1

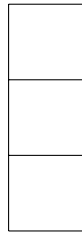


Fig 2



Fig 3

How many tiles in Figure 6?

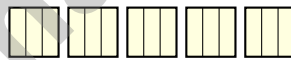
A. 7

C. 10

B. 8

D. 12

2) A baker makes cookies using $\frac{1}{3}$ -cup batches of butter. How many batches are used if she uses 5 cups of butter total?



1 cup 1 cup 1 cup 1 cup 1 cup

5 cups split into one-third-cup batches

A. 10

C. 15

B. 12

D. 20



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1) Add: $5\frac{1}{6} + 1\frac{5}{6}$

A. $6\frac{1}{3}$

B. $6\frac{5}{6}$

C. $7\frac{1}{6}$

D. 7

2) Add: $\frac{1}{3} + \frac{1}{4}$

A. $\frac{2}{7}$

B. $\frac{2}{12}$

C. $\frac{1}{12}$

D. $\frac{7}{12}$

3) Find the missing digit: $3.4? + 2.15 = 5.67$

A. 1

B. 2

C. 3

D. 4

4) A triangle has sides of 4 cm, 7 cm, and 9 cm. What type of triangle is it based on its sides?

 A. Scalene B. Equilateral C. Isosceles D. Right

5) The table follows the rule “multiply the input by 3, then add 2.” Which ordered pair does NOT fit the pattern?

Input	1	2	3	4
Output	5	8	11	?

A. (1, 5)

B. (2, 8)

C. (3, 11)

D. (4, 15)



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1) What is $\frac{1}{6} \times \frac{1}{2}$ in simplest form?

A. $\frac{1}{8}$

B. $\frac{1}{12}$

C. $\frac{2}{8}$

D. $\frac{1}{3}$

2) Which method can be used to find the least common denominator?

 A. Use only the first denominator B. Find the largest denominator C. Add the denominators D. List multiples and find the first common one

3) Add three fractions: $\frac{1}{3} + \frac{1}{4} + \frac{1}{6}$

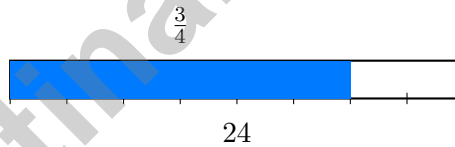
A. $\frac{9}{12}$ or $\frac{3}{4}$

B. $\frac{3}{13}$

C. $\frac{3}{6}$

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

4) A recipe uses $\frac{3}{4}$ cup of oats for each batch. How many cups of oats are needed for 24 batches?



A. 6

B. 12

C. 18

D. 24



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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 scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice A is correct.** **(5.OA.3)** Pattern: add 1 tile each figure. Fig 1 = 2, Fig 2 = 3, Fig 3 = 4. Figure 6 = 7.
- Choice C is correct.** **(5.NF.7)** $5 \div \frac{1}{3} = 5 \times 3 = 15$. She uses 15 batches.
- Choice A is correct.** **(5.G.4)** The top and bottom sides are parallel, but the left and right sides are not parallel. So the figure has exactly one pair of parallel sides.
- Choice A is correct.** **(5.MD.3)** A cubic unit is a cube where each edge measures exactly 1 unit. It has volume of 1 cubic unit.
- Choice A is correct.** **(5.G.3)** Shape A is a right triangle. Its bottom and left sides meet at a right angle, so they are perpendicular, and no two sides of a triangle are parallel.
- Choice C is correct.** **(5.MD.3)** Find each part first: Prism A is $8 \times 2 \times 3 = 48$ cubic feet, and Prism B is $3 \times 5 \times 5 = 75$ cubic feet. Because the parts do not overlap, add them: $48 + 75 = 123$ cubic feet.
- Choice B is correct.** **(5.NF.1)** The denominator 10 is multiplied by 3 to make 30. Multiply the numerator by 3: $\frac{7}{10} = \frac{21}{30}$.
- Choice A is correct.** **(5.NF.2)** Add the fractional measurements shown: $3(\frac{1}{2}) + 2(1) + 3(1\frac{1}{2}) + 2 + 2\frac{1}{2} = 12\frac{1}{2}$ hours.
- Choice C is correct.** **(5.MD.1)** 1 kilometer = 1,000 meters. Multiply: $4.5 \times 1000 = 4500$ m.
- Choice D is correct.** **(5.NBT.2)** Dividing by 10 moves the decimal point 1 place left: $4.5 \div 10 = 0.45$.
- The correct answer is $\frac{1}{24}$.** **(5.NF.6)** A complete response shows one whole divided into 6 equal sixths, then one sixth divided into 4 equal parts. That makes 24 equal parts in the whole, so each part is $\frac{1}{24}$.
- Choice A is correct.** **(5.MD.1)** Total needed: 5 feet 6 inches = 66 inches. Already bought: 2 feet 10 inches = 34 inches. Remaining: $66 - 34 = 32$ inches = 2 feet 8 inches.
- Choice C is correct.** **(5.NF.1)** $\frac{2}{3}$ and $\frac{3}{4}$ have LCD 12, not 20. The first two matches are correct.
- Choice B is correct.** **(5.OA.1)** Move outward through the grouping symbols: $5 - 2 = 3$, then $[4 \times 3] = 12$, then $\{3 + 12\} = 15$. Finally, $2 \times 15 = 30$.
- The correct answer is 360 ft³.** **(5.MD.4)** $15 \times 4 \times 6 = 360$ ft³.
- The correct answer is $\frac{7}{12}$.** **(5.NF.1)** LCD = 12. $\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$.
- Choice B is correct.** **(5.MD.4)** If there are 2 layers with 6 cubes each: $6 + 6 = 12$ or $6 \times 2 = 12$ unit cubes.
- Choice D is correct.** **(5.NBT.5)** Round 312 to 300. Then $300 \times 8 = 2,400$.
- Choice B is correct.** **(5.G.2)** The first coordinate, 12, matches the x-axis label: hours. The second coordinate, 360, matches the y-axis label: parts made. So the point means parts made is 360 when hours is 12.
- Choice D is correct.** **(5.NBT.7)** Grid shows 0.405 shaded. Tenths: 0.405 has 4, 0.504 has 5. So $0.504 > 0.405$ because 5 tenths $>$ 4 tenths.
- Choice C is correct.** **(5.NF.5)** $24 \times \frac{5}{6} = 20$ inches. Multiplying by $\frac{5}{6}$ (less than 1) gives a smaller result, but still close to the original.
- Choices A, B are correct.** **(5.G.4)** An equilateral triangle has three equal sides, and a right triangle has one 90° angle. C describes isosceles, and D contradicts obtuse.
- Choice B is correct.** **(5.NF.7)** Dividing by a whole number means multiplying by its reciprocal: $\frac{1}{6} \div 4 = \frac{1}{6} \times \frac{1}{4} = \frac{1}{24}$.
- Choice B is correct.** **(5.NBT.2)** 1,000 has three zeros and 100 has two zeros. Together they make 100,000.
- Choice A is correct.** **(5.NF.6)** $\frac{2}{5} \times \frac{5}{6} = \frac{10}{30}$, which simplifies to $\frac{1}{3}$ pound.
- Choice D is correct.** **(5.NBT.6)** Compatible numbers close to 3,149 and 59 are 3,000 and 60. So $3,000 \div 60 = 50$ is a good estimate. Actual: $3,149 \div 59 = 53$ R22.
- Choice D is correct.** **(5.MD.1)** Since 1 pint = 2 cups, divide 8 by 2: $8 \div 2 = 4$ pints.
- Choice A is correct.** **(5.NBT.1)** In expanded form, $7.346 = 7 + 0.3$ (tenths) $+ 0.04$ (hundredths) $+ 0.006$ (thousandths).
- Choice C is correct.** **(5.MD.1)** Total cost: $42.75 + 38.50 + 55.25 = 136.50$ dollars. Change: $150.00 - 136.50 = 13.50$ dollars.
- Choice D is correct.** **(5.NBT.7)** $100.50 - 67.83 = 32.67$. Requires careful borrowing.



Authors' Notes

A Message From Your Math Partner

Hey there, Problem Solver!

◇ Incredible work! You've journeyed through 4 complete practice tests, and that's no small accomplishment! Each question you tackled strengthened your mathematical thinking. When you began, some problems might have felt overwhelming, but now you've developed the skills to break them down systematically. You've transformed into a confident mathematician who understands that persistence beats perfection every single time! ◇

★ **Here's something mathematicians understand:** mistakes are simply opportunities to learn something new. The greatest problem-solvers in history made countless errors before their breakthroughs. Through these 4 tests, you've practiced that same growth mindset. You've discovered that every challenging problem teaches you something valuable, and that knowledge stays with you forever! ★

Your Mathematical Growth Journey

- **Problem-Solving Skills:** EXCEPTIONALLY DEVELOPED! You can analyze complex situations with confidence!
- **Strategic Thinking:** SIGNIFICANTLY STRENGTHENED! You recognize patterns and apply effective strategies!
- **Persistence Level:** REMARKABLY HIGH! You've proven you can work through any challenge!
- **Test Readiness:** COMPLETELY PREPARED! You have all the tools you need to succeed!

Remember this: test day is your opportunity to demonstrate everything you've learned! You've completed 4 comprehensive practice tests; that's substantial preparation! You've analyzed problems, applied strategies, and developed mathematical confidence. Now it's time to showcase your abilities! Take a calming breath, trust your preparation, and remember that every skill you've built is ready to support you. You've got this!

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

Math Teacher and Your Cheer Squad

4 COMPLETE TESTS. CONFIDENCE. SUCCESS.



Give your child the practice and confidence they need to excel in **Grade 5 Math**. This book includes **4 full-length** practice tests designed to build skills, improve test readiness, and help students reach their full potential.

WHAT'S INSIDE:



4 COMPLETE PRACTICE TESTS

Full-length tests that reflect real test format and rigor.



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BUILD CONFIDENCE & IMPROVE SCORES

Practice consistently, reduce test anxiety, and achieve your best score!



PRACTICE SMART. LEARN MORE. ACHIEVE YOUR BEST.



Strengthen
Math Skills



Improve
Accuracy
& Speed



Master
Essential
Concepts



Boost
Confidence
on Test Day



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