

9

South Dakota

Smarter Balanced

GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice
for Strong Math Performance

$$A = l \times w$$

$$x^2 + 3x - 4 = 0$$

$$y = 2x + 1$$



$$2,345 \times 6 = 14,070$$



$$\frac{3}{4} + \frac{1}{8} = \frac{7}{8}$$

$$7.2 \div 0.8 = 9$$



$$(12 + 8) \div 4 = 5$$



Build Confidence



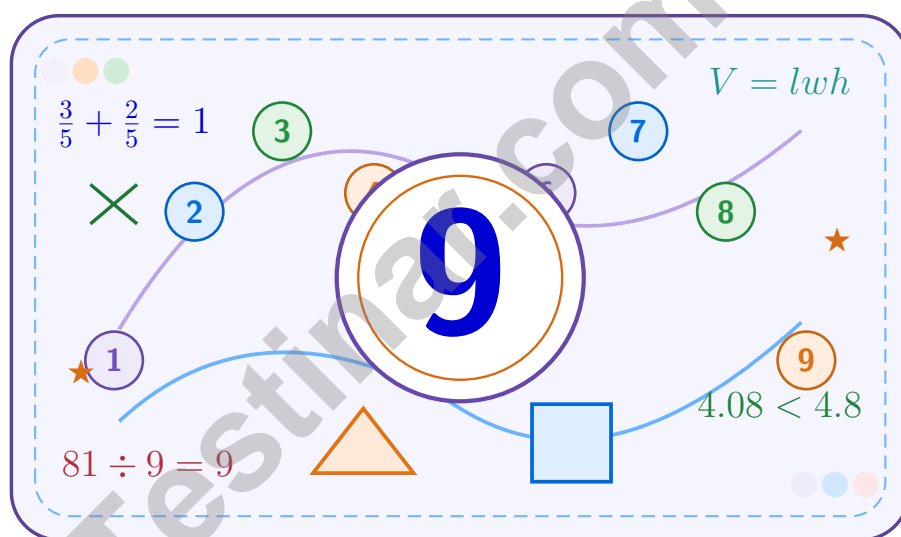
Improve Math Skills



Achieve Success

9 South Dakota Smarter Balanced Grade 5 Math Practice Tests

A nine-step confidence climb with clear review, smart strategy, and practice that gets stronger every round



Nine full tests, focused skill boosters, and student-friendly support from start to finish for Grade 5 mathematicians who want to climb higher.

Jay Daie and Reza Nazari



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Welcome to the Confidence Climb

This book is here to help you practice with purpose and rise step by step

To the Grade 5 Mathematician

This practice book is a place to think, try, fix, and grow. You do not have to be perfect on the first question or the first test. What matters most is careful effort, clear work, and learning from each round of practice.

Use these nine tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up fast.

Try

Give each problem your best thinking.

Check

Study mistakes and learn what happened.

Rise

Bring that lesson into the next round.

A strong habit for every page: read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

How to Use This Book

A simple practice routine that turns nine tests into steady growth

A Nine-Session Climb Map

Session	Mission Focus
1	Take Test 1; review place value and operation slips.
2	Take Test 2; keep work neat and easy to read.
3	Take Test 3; give extra time to fractions and decimals.
4	Take Test 4; slow down on word problems and units.
5	Take Test 5; compare scores and habits with earlier rounds.
6	Take Test 6; notice which habits are now automatic.
7	Take Test 7; explain open-ended answers clearly.
8	Take Test 8; review topics that still need attention.
9	Take Test 9; finish with calm, careful, confident work.

Step 1: Warm Up

Start with the quick review.
Spend a few minutes refreshing the ideas before you start a test.

Step 2: Take the Test

Take one full practice test.
Work in a quiet space and let accuracy matter more than speed.

Step 3: Study the Pattern

Check your work honestly.
Circle missed questions and notice patterns in the mistakes.

Step 4: Learn, Then Retry

Read the explanation and try again.
Learning happens after the test too. Fixing mistakes is one of the smartest parts of practice.



Scan me

Test Overview

What this practice book helps students do

These practice tests are designed to help Grade 5 students get comfortable with the kind of thinking used on the South Dakota Smarter Balanced. The goal is bigger than only getting answers right. Students are practicing how to read closely, choose a strategy, solve carefully, and explain their work when needed.

Selected-Response Questions

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

Constructed-Response Questions

Students show their thinking, steps, models, or explanations. Even when unsure, writing what they know can help organize the problem.

Grade 5 Skills You Will Practice Often

- place value, comparing numbers, and rounding
- multi-digit addition, subtraction, multiplication, and division
- fractions, decimals, and mixed numbers
- perimeter, area, volume, and measurement conversions
- coordinate points, patterns, graphs, and tables
- geometry and multi-step word problems

What strong work looks like: the answer is correct, the steps are clear, the labels or units are included, and the final result makes sense.



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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)

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- 1) A rectangular prism has a base area of 72 cm^2 and a height of 5 cm. What is the volume?

Base area 72 cm^2
Height 5 cm

- A. 300 cm^3 C. 360 cm^3
 B. 330 cm^3 D. 400 cm^3
- 2) In an error, a student plots points from Rules A and B but accidentally swaps the coordinates. Rule A: 2, 4, 6, 8. Rule B: 1, 2, 3, 4. The student writes (1, 2), (2, 4), (3, 6), (4, 8). What is the first correct pair?

- A. (2, 1) C. (4, 8)
 B. (1, 2) D. (8, 4)

- 3) Divide: $18.9 \div 3$. Which shows the correct steps?

Option	Steps
A	Divide $189 \div 3 = 63$, place decimal to get 6.3
B	Divide $189 \div 3 = 63$, place decimal to get 63.0
C	Divide $18 \div 3 = 6$ and ignore the 0.9
D	Divide $189 \div 3 = 63$, place decimal to get 63

- A. Option A C. Option C
 B. Option B D. Option D
- 4) Complete the pattern: $1.2 \times 10 = 12$, $1.2 \times 100 = 120$, $1.2 \times 1000 = ?$

- A. 12 C. 1200
 B. 120 D. 12000



5) A garden plot uses $\frac{2}{5}$ of the yard for vegetables and $\frac{1}{6}$ for flowers. What fraction is used together?

- A. $\frac{3}{11}$
 B. $\frac{17}{30}$

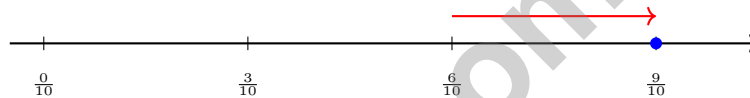
- C. $\frac{3}{30}$
 D. $\frac{7}{30}$

6) Estimate each expression. Which result is closest to 0?

- A. $\frac{1}{12} + \frac{1}{15}$
 B. $\frac{1}{2} + \frac{1}{3}$

- C. $\frac{7}{8} - \frac{1}{8}$
 D. $\frac{9}{10} + \frac{8}{9}$

7) Number line: Start at $\frac{9}{10}$. Back by $\frac{3}{10}$.



Where do you land?

- A. $\frac{5}{10}$
 B. $\frac{6}{10}$

- C. $\frac{7}{10}$
 D. $\frac{8}{10}$

8) A track is $\frac{1}{4}$ kilometer long. A student runs the track 8 times. How far does the student run?

- A. 2 km
 B. $\frac{1}{32}$ km

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

9) An artist uses $\frac{5}{12}$ gallon of paint on a wall. The door uses $\frac{2}{3}$ as much paint as the wall. How much paint is used on the door? Give the answer in simplest form.

- A. $\frac{10}{15}$ gallon
 B. $\frac{5}{18}$ gallon

- C. $\frac{7}{15}$ gallon
 D. $\frac{1}{2}$ gallon



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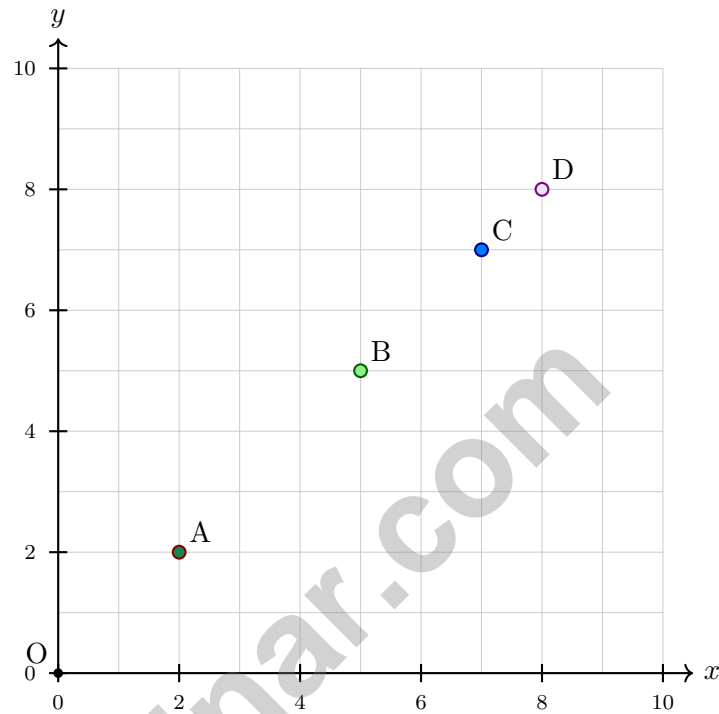
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- 1) Plot these points and answer: using horizontal and vertical grid steps, which point is closest to the origin? Point A: (2, 2), Point B: (5, 5), Point C: (7, 7), Point D: (8, 8).



- A. Point A
- B. Point B
- C. Point C
- D. Point D
- 2) Add: $3\frac{2}{9} + 2\frac{5}{9}$
- A. $5\frac{7}{9}$
- B. $5\frac{8}{9}$
- C. $6\frac{1}{9}$
- D. $6\frac{2}{9}$
- 3) A container has 3 liters of water. Each bottle holds $\frac{1}{2}$ liter. How many bottles can be filled?
- A. 2 bottles
- B. 4 bottles
- C. 8 bottles
- D. 6 bottles



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 South Dakota scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(5.MD.4)** Volume = base area \times height = $72 \times 5 = 360 \text{ cm}^3$.
- 2) **Choice A is correct.** **(5.G.2)** The student plotted (Rule B, Rule A), but the correct order is (Rule A, Rule B). The first correct pair is (2, 1).
- 3) **Choice A is correct.** **(5.NBT.7)** 18.9 has 1 decimal place. $189 \div 3 = 63$; move decimal 1 place left to get 6.3.
- 4) **Choice C is correct.** **(5.NBT.2)** Following the pattern, $1.2 \times 1000 = 1200$ (move decimal 3 places right).
- 5) **Choice B is correct.** **(5.NBT.2)** Common denominator is 30: $\frac{2}{5} = \frac{12}{30}$ and $\frac{1}{6} = \frac{5}{30}$. So $\frac{12}{30} + \frac{5}{30} = \frac{17}{30}$.
- 6) **Choice A is correct.** **(5.NF.6)** Both fractions in choice A are very small, so their sum is close to 0. The other choices are much closer to $\frac{3}{4}$, 1, or 2.
- 7) **Choice B is correct.** **(5.NF.1)** $\frac{9}{10} - \frac{3}{10} = \frac{6}{10}$.
- 8) **Choice A is correct.** **(5.NF.4)** $8 \times \frac{1}{4} = \frac{8}{4} = 2$ kilometers.
- 9) **Choice B is correct.** **(5.NF.4)** $\frac{2}{3} \times \frac{5}{12} = \frac{10}{36}$, which simplifies to $\frac{5}{18}$ gallon.
- 10) **The correct answer is rectangle.** **(5.G.4)** A square has all the properties of a rectangle: four right angles and two pairs of opposite sides that are parallel. A square is a special type of rectangle.
- 11) **Choice D is correct.** **(5.G.4)** $9\frac{7}{8} - 4\frac{3}{8} = 5\frac{4}{8} = 5\frac{1}{2}$ ft.
- 12) **Choice C is correct.** **(5.NF.1)** One yard has 5 fifth-yard pieces. $30 \div \frac{1}{5} = 30 \times 5 = 150$ wristbands.
- 13) **The correct answer is 8688.** **(5.NBT.5)** $362 \times 4 = 1,448$ and $362 \times 20 = 7,240$. Sum: $1,448 + 7,240 = 8,688$.
- 14) **Choice B is correct.** **(5.NBT.5)** LCM(10,5) = 10. $\frac{1}{5} = \frac{2}{10}$. $\frac{3}{10} + \frac{2}{10} = \frac{5}{10} = \frac{1}{2}$ meter.
- 15) **Choice A is correct.** **(5.NBT.2)** Use the fact $4 \times 6 = 24$. The factors 4,000 and 60 bring four zeros total, so the product is 240,000.
- 16) **Choice D is correct.** **(5.NBT.2)** An isosceles triangle has at least two equal sides, which also means it has two equal angles. This triangle has three different angle measures, so it is right scalene, not isosceles.
- 17) **Choice B is correct.** **(5.NBT.1)** Adding the expanded parts: $8 + 0.5 + 0.03 + 0.001 = 8.531$.
- 18) **Choices A, C are correct.** **(5.NBT.1)** Good checking means testing every choice. B evaluates to 16, and D evaluates to 17, so they do not belong in the answer set.
- 19) **Choice D is correct.** **(5.OA.1)** $4\frac{1}{2} = \frac{9}{2}$ and $2\frac{1}{3} = \frac{7}{3}$. Multiply: $\frac{9}{2} \times \frac{7}{3} = \frac{63}{6} = 10\frac{1}{2}$ square meters.
- 20) **Choice C is correct.** **(5.NF.2)** The marks show 3 boards at $\frac{1}{2}$ ft, 2 boards at $1\frac{1}{2}$ ft, 3 boards at $2\frac{1}{2}$ ft, and 1 board at 3 ft. Total: $(\frac{1}{2} \times 3) + (1\frac{1}{2} \times 2) + (2\frac{1}{2} \times 3) + (3 \times 1) = 1\frac{1}{2} + 3 + 7\frac{1}{2} + 3 = 15$ feet.
- 21) **Choice D is correct.** **(5.NBT.2)** Dividing by 100 moves the decimal point two places to the left. $1,800 \div 100 = 18$.
- 22) **Choice C is correct.** **(5.NBT.2)** Add wholes: $2 + 3 = 5$. Add fractions: $\frac{3}{4} + \frac{1}{4} = 1$. Total: 6.
- 23) **Choice B is correct.** **(5.NF.1)** The decimal 0.63 is read as “sixty-three hundredths” because there are two decimal places (hundredths position). Avoid using “point” or “and” when reading decimals less than 1.
- 24) **Choice B is correct.** **(5.NBT.2)** $10^3 = 1,000$, so $25 \times 10^3 = 25 \times 1,000 = 25,000$. The answer 2,500 is what you get from 25×100 .
- 25) **Choice A is correct.** **(5.G.1)** In an ordered pair (x, y) , the first number is the x-coordinate. For (6, 4), the x-coordinate is 6.
- 26) **Choice B is correct.** **(5.OA.3)** Check the matching terms: $1 \times 4 = 4$, $3 \times 4 = 12$, $5 \times 4 = 20$, and $7 \times 4 = 28$.
- 27) **The correct answer is 60.** **(5.MD.4)** Multiply the number of cubes in each layer by the number of layers: $12 \times 5 = 60$. The volume is 60 cubic units.
- 28) **The correct answer is 10.** **(5.MD.4)** A common denominator must be a multiple of each denominator. Since 10 is a multiple of 5, 2, and 10, the LCD is 10.
- 29) **Choice B is correct.** **(5.NF.1)** Only B is correct. For the nearest tenth, look at the hundredths digit (3). Since $3 < 5$, the tenths stays 2, giving 6.2. A names the wrong place (6.24 has two decimal places, not one). C is wrong because the tenths digit (2) is less than 5, so 6.234 rounds down to 6, not up to 7. D is wrong because the thousandths digit is 4, so the hundredths stays 3, giving 6.23 (not 6.24).



Strong Climber, Listen Up!

◇ You did it. You climbed all 9 practice tests like a steady mountain climber—one foothold, one breath, one step at a time. The view from the top is wonderful because you earned it. Test day is the next peak, and you are stronger than the climber you were when you started. ◇

★ **Here is what mountain guides teach:** pacing matters more than speed. Take steady steps. Check your footing. Keep your eyes on the path. The same wisdom helps on a math test: read carefully, work calmly, and check your work before you move on. ★

Climber's Field Notes

- **Endurance:** STRONG! You can finish a long climb without losing focus.
- **Footwork:** STEADY! Your steps (your steps in problem-solving) are reliable.
- **Map Reading:** CLEAR! You read questions carefully before you start.
- **Summit Mindset:** READY! You know how to push through the last stretch.

Field tip: on test day, take small breaths between problems. Each problem is a foothold. Take it. Move on. Take the next. That is how mountains get climbed—and how tests get conquered.

If you want to share a proud moment or ask a question, please email me at jay@testinar.com. I'd love to hear from you!

Jay Daie

Your Math Guide (Onward and Upward)

PRACTICE MORE. ACHIEVE MORE.

Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

9

**FULL-LENGTH
PRACTICE
TESTS**

- ✓ Realistic.
- ✓ Rigorous.
- ✓ Results-Driven.

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Build Confidence

Familiar, focused practice reduces anxiety and boosts self-belief.



Strengthen Skills

Reinforces key math concepts through high-quality, standards-aligned questions.



Improve Test Readiness

Full-length tests help students understand test format, pacing, and question types.



Track Progress

Identify strengths and target areas with purposeful practice.



Achieve Success

Better preparation leads to higher scores and bright futures.

COVERS ALL ESSENTIAL TOPICS

- ✓ Whole Numbers & Operations
- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ And More!



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