



# 6

# South Dakota

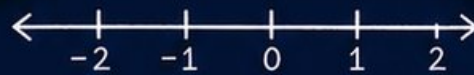
## Smarter Balanced



# GRADE 5 MATH

## PRACTICE TESTS

Complete Standards-Based Practice  
— for Grade 5 Math Success —



$$5^2 = 25$$



**6 FULL-LENGTH  
PRACTICE TESTS**  
Realistic style questions



**STANDARDS-BASED  
PRACTICE**  
Covers all Grade 5  
Math standards

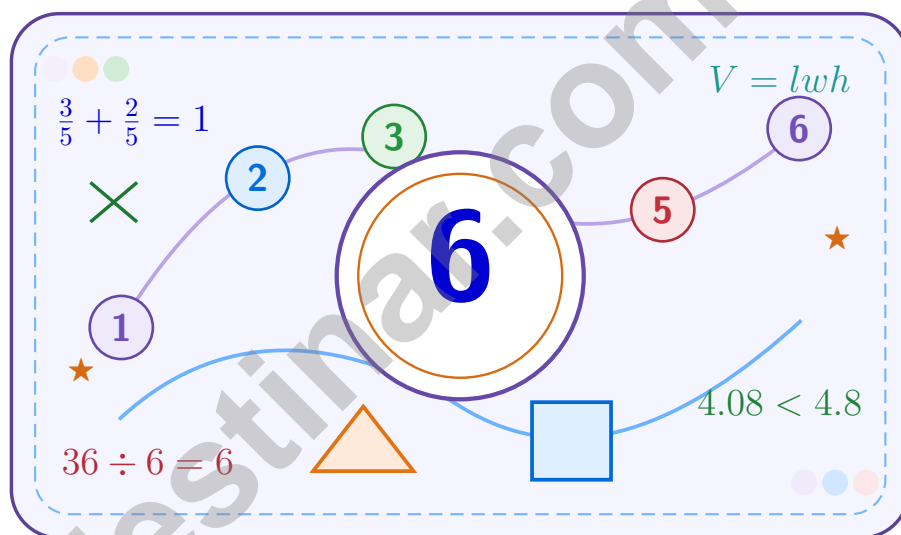


**BUILD CONFIDENCE.  
IMPROVE SCORES.**  
Target weak areas and  
achieve success

★ STRONG PRACTICE. BRIGHT FUTURE. ★

# 6 South Dakota Smarter Balanced Grade 5 Math Practice Tests

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



Six full tests, a focused skill booster, 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 six 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 six tests into steady growth

## 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.

## A Six-Week Climb Map

Week	Mission Focus
<b>Week 1</b>	Take Test 1 and review any place-value or operation slips.
<b>Week 2</b>	Take Test 2 and focus on showing neat, easy-to-read work.
<b>Week 3</b>	Take Test 3 and give extra time to fractions or decimals if needed.
<b>Week 4</b>	Take Test 4 and slow down on word problems and units.
<b>Week 5</b>	Take Test 5 and compare your score and habits with earlier rounds.
<b>Week 6</b>	Take Test 6 and finish with calm, careful, confident work that uses everything you practiced before.



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# 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.



# Table of Contents

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Grade 5 Mathematics

1

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



## 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)

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

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### 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) What is  $87.6 \div 100$ ?

A. 8.76

C. 876

B. 0.087

D. 0.876

2) A student buys fabric for a project. She needs 2.5 yards per garment and makes 8 garments. How much fabric does she use?

A. 18 yards

C. 20 yards

B. 19 yards

D. 22 yards

3) Triangle P has side lengths 6 cm, 6 cm, and 8 cm. Classify Triangle P by its sides.

*Record your answer in the space provided.*

4) What is the missing quotient in this division chain?

$$816 \div 17 = 48 \quad 408 \div 17 = ?$$

A. 24

C. 40

B. 32

D. 48

5) Evaluate:  $25 - (8 + 2) \div 5$

A. 3

C. 21

B. 17

D. 23



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1) What is the value of  $(2 + 3) \times (2 + 3)$ ?

- A. 10                                       C. 25  
 B. 15                                       D. 30

2) A factory makes 100 units per day. After 19 days, how many units are made?

Days	19
Units per Day	100
Total	?

- A. 119                                       C. 19000  
 B. 1900                                     D. 190

3) Compare:  $(20 + 30) \times 7$    $20 \times 7 + 30 \times 7$

- A. >     C. =  
 B. <     D. Cannot tell

4) Add:  $2.57 + 3.49 = ?$

- A. 6.04                                       C. 6.06  
 B. 6.05                                       D. 6.15

5) A rectangular garden is 2.4 meters long and 1.5 meters wide. What is its area?

- A.  $3.6 \text{ m}^2$                                        C.  $4.0 \text{ m}^2$   
 B.  $3.9 \text{ m}^2$                                        D.  $3.8 \text{ m}^2$

6) A class has 24 students. If  $\frac{1}{6}$  of them are absent, how many students are absent?

- A. 6 students absent                                       C. 12 students present  
 B. 18 students present                                     D. 4 students absent



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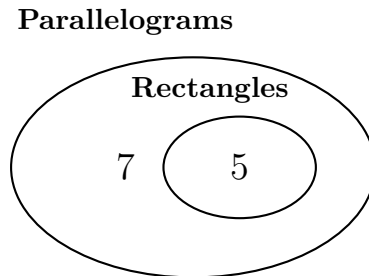
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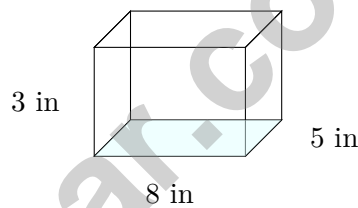


1) A Venn diagram shows rectangles inside parallelograms:



How many parallelograms are outside the rectangle circle?

- |                                |                               |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> A. 5  | <input type="checkbox"/> C. 7 |
| <input type="checkbox"/> B. 12 | <input type="checkbox"/> D. 2 |



2)

If this prism is stacked 2 times (doubling the height), what is the new volume?

- |   |   |
|---|---|
| <input type="checkbox"/> A. 120 in <sup>3</sup> | <input type="checkbox"/> C. 360 in <sup>3</sup> |
| <input type="checkbox"/> B. 240 in <sup>3</sup> | <input type="checkbox"/> D. 480 in <sup>3</sup> |

3) Rule: add 2 (start 0) and add 4 (start 0). Identify the relationship between the two patterns:

- A. The “add 4” pattern is double the “add 2” pattern
- B. The “add 2” pattern is larger
- C. They are equal
- D. The “add 4” pattern is always 4 greater than the “add 2” pattern



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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 D is correct.** (5.NBT.2) Dividing by 100 moves the decimal 2 places left:  $87.6 \rightarrow 8.76 \rightarrow 0.876$ .
- Choice C is correct.** (5.NBT.7)  $2.5 \times 8 = 20$ . Multiply:  $25 \times 8 = 200$ , then place decimal one place from right:  $20.0 = 20$  yards.
- The correct answer is isosceles.** (5.G.4) Two side lengths are equal, so Triangle P is isosceles.
- Choice A is correct.** (5.NBT.6) If  $816 \div 17 = 48$ , then 408 (half of 816) divided by 17 gives half the quotient:  $408 \div 17 = 24$ .
- Choice D is correct.** (5.OA.1) Start with the parentheses:  $8 + 2 = 10$ . Then  $10 \div 5 = 2$ , and subtracting gives  $25 - 2 = 23$ .
- Choice B is correct.** (5.NF.1) Add:  $\frac{9}{10} + 4\frac{1}{10} = 5$ .
- Choice D is correct.** (5.NF.6) Check the factor by multiplying:  $\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$ . One half of  $\frac{3}{5}$  is exactly  $\frac{3}{10}$ , so the missing factor is  $\frac{1}{2}$ .
- Choice C is correct.** (5.MD.1) Multiply:  $1,200 \times 12 = 14,400$  dollars annually.
- The correct answer is 0.45.** (5.NBT.1) Multiplying by 10 moves the decimal point one place right:  $0.045 \rightarrow 0.45$ .
- Choice A is correct.** (5.OA.2) The amount being divided is the sum  $8 + 4$ , and the divisor is the difference  $10 - 6$ . That is why both parts need grouping in the fraction.
- Choice B is correct.** (5.NF.7) The point is halfway from 0 to  $\frac{1}{4}$ . Half of  $\frac{1}{4}$  is  $\frac{1}{8}$ , so the first division is  $\frac{1}{8}$ .
- Choice D is correct.** (5.NF.5) The products are 18, 24, and 30 respectively. The factor size ( $\frac{3}{4} < 1 < \frac{5}{4}$ ) determines the product order.
- Choice A is correct.** (5.NF.1) To create equivalent fractions, you must multiply or divide both numerator and denominator by the same nonzero number. Changing only the denominator creates a different fraction. The correct equivalent would be  $\frac{3}{5} = \frac{6}{10}$  (multiply both by 2).
- Choice B is correct.** (5.NF.6)  $8\frac{5}{6}$  rounds to 9 and  $3\frac{4}{7}$  rounds to 4. So  $8\frac{5}{6} - 3\frac{4}{7} \approx 9 - 4 = 5$ .
- Choice D is correct.** (5.MD.3) Find each part first: Prism A is  $9 \times 4 \times 2 = 72$  cubic meters, and Prism B is  $6 \times 2 \times 1 = 12$  cubic meters. Because the parts do not overlap, add them:  $72 + 12 = 84$  cubic meters.
- The correct answer is 30 apples.** (5.G.2) The  $x$ -coordinate is 5, so it represents 5 bags. The  $y$ -coordinate is 30, so it represents 30 apples.
- Choice D is correct.** (5.OA.3) Compare matching terms:  $6 = 3 \times 2$ ,  $12 = 3 \times 4$ ,  $18 = 3 \times 6$ ,  $24 = 3 \times 8$ , and  $30 = 3 \times 10$ .
- Choice A is correct.** (5.MD.5) Sugar =  $\frac{1}{2} \times \frac{2}{3} = \frac{2}{6} = \frac{1}{3}$  cup.
- Choices A, B are correct.** (5.NF.7) Dividing by  $\frac{1}{4}$  asks how many fourths are in 5 wholes, so use  $5 \times 4 = 20$ . Choices C and D use the wrong operation.
- Choice D is correct.** (5.NBT.2)  $10^2 = 100$ , so  $9,400 \div 100 = 94$ .
- Choice A is correct.** (5.NF.1) Use sixths:  $\frac{1}{3} = \frac{2}{6}$ . Then  $\frac{1}{6} + \frac{2}{6} = \frac{3}{6} = \frac{1}{2}$ .
- Choice D is correct.** (5.MD.4) Volume =  $11 \times 11 \times 11 = 1331$  cubic centimeters.
- The correct answer is (6, 3).** (5.G.2) Start with (0, 0). Then match the next terms from each pattern: (2, 1), (4, 2), and (6, 3). Accept equivalent spacing or comma formatting.
- Choice A is correct.** (5.MD.5) The base area is  $8 \times 6 = 48$  square centimeters. Since  $240 \div 48 = 5$ , the height is 5 cm.
- Choice C is correct.** (5.G.2) The base  $\overline{AB}$  lies on  $y = 3$ . Point  $C$  is at  $y = 7$ , so it is  $7 - 3 = 4$  units above the base.
- Choice C is correct.** (5.NBT.2)  $5.08 \times 1,000 = 5,080$ . The digits shift three places to greater place values.
- Choice D is correct.** (5.NF.6) He needs  $\frac{3}{5}$  of  $\frac{2}{3}$  cup, so multiply:  $\frac{3}{5} \times \frac{2}{3} = \frac{6}{15}$ , which simplifies to  $\frac{2}{5}$  cup.
- Choice B is correct.** (5.NBT.5) Add the four partial products:  $(20 \times 10) + (5 \times 10) + (20 \times 3) + (5 \times 3) = 200 + 50 + 60 + 15 = 325$ .
- Choice A is correct.** (5.NF.6) Each whole contains 4 pieces of size  $\frac{1}{4}$ . With 3 wholes, there are  $3 \times 4 = 12$  pieces.
- Choice C is correct.** (5.NF.6) A sixth-box kit means 6 kits per full box.  $15 \div \frac{1}{6} = 15 \times 6 = 90$  kits.



### Engineering Design Review

#### Hey there, Master Engineer!

★ Excellent engineering work! You've successfully designed and tested six complete mathematical systems, applying principles, calculating specifications, and optimizing solutions like a professional engineer! Every problem presented unique design challenges, and you approached each one methodically, testing your designs and making improvements. Your engineering mindset has developed beautifully! ★

◇ **Here's what successful engineers know:** great engineering requires planning, calculation, testing, and refinement. Engineers build prototypes, identify weaknesses, and improve their designs iteratively. You've practiced that exact engineering cycle through these six tests! Each test helped you refine your mathematical engineering skills, and now your designs are structurally sound and ready for implementation! ◇

#### Engineering Quality Control

- **System Design:** Your problem-solving frameworks are logically structured!
- **Precision Engineering:** You calculate with accuracy and attention to detail!
- **Stress Testing:** You've proven your methods work under challenging conditions!
- **Project Approved:** Your mathematical engineering is ready for deployment!

**Remember this engineering principle:** well-designed systems function reliably when needed. You've engineered six successful mathematical systems. On test day, deploy your proven designs with confidence. If you encounter an unexpected specification, apply your engineering principles to design an appropriate solution. Your training has prepared you for any design challenge!

Want to share your mathematical engineering innovations or discuss an elegant system design? Submit your technical specifications to [reza@testinar.com](mailto:reza@testinar.com). I appreciate innovative engineering!

**Reza Nazari & Jay Daie**

Your Math Coaches for Clear Work

# 6 FULL-LENGTH TESTS. ENDLESS POTENTIAL.

PRACTICE TODAY. SUCCEED TOMORROW.

Give your child the tools they need to build strong math skills and test-taking confidence! This book includes **6 full-length practice tests** along with standards-based practice, mixed review, word problems, and a complete answer key.

★★★  
PRACTICE  
WITH PURPOSE.  
ACHIEVE WITH  
CONFIDENCE.

## WHAT'S INSIDE:



### 6 FULL-LENGTH PRACTICE TESTS

Realistic tests designed to reflect the actual test format and help build confidence.



### STANDARDS-BASED PRACTICE

Covers all essential Grade 5 math standards with clear explanations and examples.



### MIXED REVIEW

Reinforces key concepts with a variety of question types and review exercises.



### WORD PROBLEMS

Build critical thinking and problem-solving skills with real-world scenarios.



### COMPLETE ANSWER KEY

Step-by-step explanations for every question to support learning and growth.



### IMPROVE. PRACTICE. ACHIEVE.

Consistent practice leads to stronger skills, higher scores, and greater success.

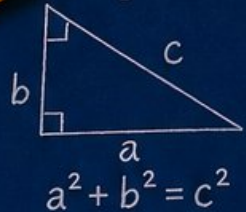


$$7 \times 6 = 42$$

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



$$5^2 = 25$$



## WHY PRACTICE MAKES A DIFFERENCE



### BUILD CONFIDENCE

Feel prepared and ready for any challenge.



### IMPROVE ACCURACY

Strengthen skills and reduce careless mistakes.



### THINK STRATEGICALLY

Develop problem-solving skills and deepen understanding.



### MANAGE TIME

Practice under timed conditions to build stamina.



### STAY MOTIVATED

Track progress and celebrate every win.



### ACHIEVE SUCCESS

Reach goals and unlock your full potential!



Visit [testinar.com/math5](https://testinar.com/math5)

for more Grade 5 math resources and practice materials!



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