

# 9

# North Dakota

# NDSA

# GRADE 5 MATHEMATICS PRACTICE TESTS

Full-Length Standards-Aligned Practice  
for Strong Math Performance

$$A = l \times w$$

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

$$y = 2x + 1$$



**9**  
FULL-LENGTH  
PRACTICE  
TESTS

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



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

$$7.2 \div 0.8 = 9$$



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



Build Confidence



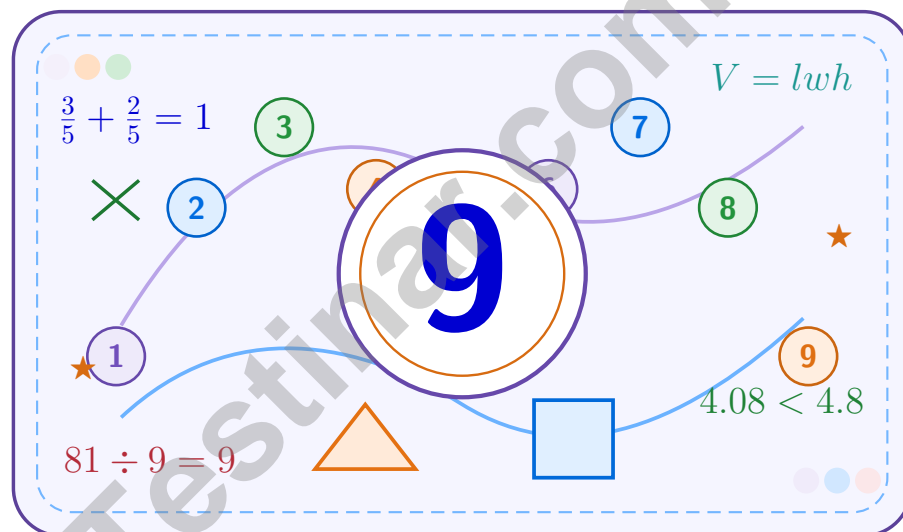
Improve Math Skills



Achieve Success

# 9 North Dakota NDSA 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



# Copyright ©

## Testinar Inc



Published by Testinar Inc

[Testinar.com](http://Testinar.com)

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



*Copyright ©*

# 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 North Dakota NDSA. 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

★ Practice Test 1	_____	14
★ Practice Test 2	_____	28
★ Practice Test 3	_____	43
★ Practice Test 4	_____	58
★ Practice Test 5	_____	73
★ Practice Test 6	_____	88
★ Practice Test 7	_____	103
★ Practice Test 8	_____	117
★ Practice Test 9	_____	133
<b>Practice Test Answer Keys</b>	_____	<b>149</b>
<b>Practice Test Answers and Explanations</b>	_____	<b>155</b>

## 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

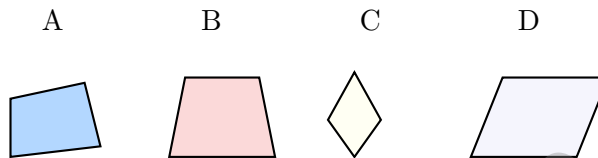
1 day = 24 hours (hr)    1 year = 52 weeks



1) A cube is built from 6 layers of unit cubes. Each layer is a  $6 \times 6$  array. How many unit cubes are in the cube?

- A. 36 unit cubes  
 B. 72 unit cubes  
 C. 216 unit cubes  
 D. 432 unit cubes

2) Which figure is a parallelogram?



- A. Figure A  
 B. Figure B  
 C. Figure C  
 D. Figure D

3) Estimate:  $\frac{5}{12} + \frac{9}{17}$ .

- A. Close to 0  
 B. Close to  $\frac{1}{2}$   
 C. Close to 1  
 D. Close to  $\frac{3}{2}$

4) A warehouse stores canned goods. There are 35 shelves with 22 cans on each shelf. How many cans are stored?

- A. 750  
 B. 760  
 C. 770  
 D. 780

5) A music store bought instruments for a total of \$4,850. They sold some for \$3,200 and returned others for \$450. How much money is still not covered by the sales and returns?

- A. \$1,300  
 B. \$1,500  
 C. \$1,400  
 D. \$1,200





## 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) Subtract:  $5\frac{3}{8} - 2\frac{1}{8}$

A.  $3\frac{1}{8}$

B.  $3\frac{4}{8}$

C.  $3\frac{3}{8}$

D.  $3\frac{2}{8}$

2) Which rectangular prism has the greatest volume?

Prism	Dimensions
A	$6 \times 5 \times 3$
B	$7 \times 4 \times 4$
C	$8 \times 3 \times 4$
D	$5 \times 5 \times 4$

 A. Prism A B. Prism B C. Prism C D. Prism D

3) Use the decimal shift diagram to find  $5,400 \div 1,000$ :



What is  $5,400 \div 1,000$ ?

 A. 5.4 B. 54 C. 540 D. 54,000

## 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) What is  $8,700 \div 1,000$ ?

A. 8.7

C. 870

B. 87

D. 87,000

2) A box weighs 3 lb 8 oz. What is its weight in ounces?

*Record your answer in the space provided.*

3) Expanded form with fractions: write  $3 + \frac{5}{10} + \frac{2}{100}$  as a decimal.

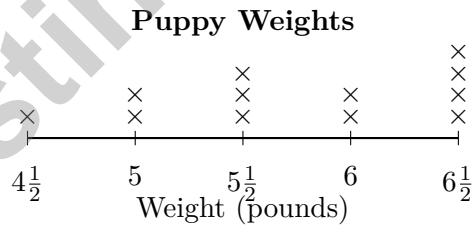
A. 3.52

C. 35.2

B. 3.25

D. 0.352

4) The line plot shows the weights (in pounds) of 12 puppies at a shelter:



How many puppies weigh  $5\frac{1}{2}$  pounds?

A. 2

C. 4

B. 3

D. 5



## 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





## 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 North Dakota scores.**

Testinar.com



## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- Choice C is correct.** (5.GM.M.3) Each layer has  $6 \times 6 = 36$  unit cubes. With 6 layers, the cube has  $36 \times 6 = 216$  unit cubes.
- Choice D is correct.** (5.GM.M.3) A parallelogram has two pairs of parallel sides. Figure D has two pairs of opposite sides parallel; Figures A, B, and C do not.
- Choice C is correct.** (5.NO.NF.3)  $\frac{5}{12} \approx \frac{1}{2}$  and  $\frac{9}{17} \approx \frac{1}{2}$ . So  $\frac{5}{12} + \frac{9}{17} \approx \frac{1}{2} + \frac{1}{2} = 1$ .
- Choice C is correct.** (5.NO.NF.3) Multiply:  $35 \times 22 = 35 \times (20 + 2) = (35 \times 20) + (35 \times 2) = 700 + 70 = 770$  cans.
- Choice D is correct.** (5.NO.NBT.4) Subtract the sales and returns from the total cost:  $4,850 - 3,200 - 450 = 1,200$ . So \$1,200 is still not covered.
- Choice B is correct.** (5.GM.G.3) Multiply the input by 10. For input 6,  $10 \times 6 = 60$ , so the ordered pair is (6, 60).
- Choice A is correct.** (5.GM.G.3) Team 1 used  $\frac{1}{2} + \frac{1}{2} + \frac{3}{4} + 1 + 1\frac{1}{4} = 4$  yards. Team 2 used  $\frac{1}{2} + \frac{3}{4} + \frac{3}{4} + 1 + 1\frac{1}{4} = 4\frac{1}{4}$  yards. The difference is  $\frac{1}{4}$  yard.
- Choice A is correct.** (5.NO.NBT.2)  $0.54 > 0.5$ , so it is not between 0.4 and 0.5. The others all satisfy  $0.4 < x < 0.5$ .
- Choice A is correct.** (5.NO.NBT.2)  $9 - 5 = 4$  and  $\frac{7}{10} - \frac{2}{10} = \frac{5}{10}$ . Result:  $4\frac{5}{10}$ .
- Choice B is correct.** (5.NO.NF.3) 1 m = 100 cm. Multiply:  $1.35 \times 100 = 135$  cm.
- Choice D is correct.** (5.GM.M.1) Since 12 inches = 1 foot, multiply 7 by 12:  $7 \times 12 = 84$  inches.
- Choice B is correct.** (5.GM.M.1) Add:  $\$7.45 + \$2.68 = \$10.13$ ; then  $\$10.13 + \$3.82 = \$13.95$ .
- Choice C is correct.** (5.NO.NBT.5) One box has volume  $3 \times 3 \times 3 = 27$  cubic meters. There are 6 boxes, so  $27 \times 6 = 162$  cubic meters.
- Choice A is correct.** (5.NO.NF.3)  $\frac{1}{2}$  and  $\frac{2}{3}$  have different denominators. With LCD 6:  $\frac{1}{2} = \frac{3}{6} \neq \frac{4}{6} = \frac{2}{3}$ .
- The correct answer is  $3\frac{1}{3}$ .** (5.NO.NF.2) Convert the mixed numbers:  $2\frac{2}{3} = \frac{8}{3}$  and  $1\frac{1}{4} = \frac{5}{4}$ . Multiply to get  $\frac{40}{12}$ , which simplifies to  $\frac{10}{3} = 3\frac{1}{3}$ .
- Choice D is correct.** (5.NO.NF.2)  $\frac{9}{12} - \frac{3}{12} = \frac{6}{12}$ , which simplifies to  $\frac{1}{2}$ .
- Choice D is correct.** (5.NO.NF.3) For  $x = 1$ :  $4(1) = 4$  check; for  $x = 2$ :  $4(2) = 8$  check; for  $x = 3$ :  $4(3) = 12$  check.
- Choice C is correct.** (5.NO.NBT.6)  $456 \div 12 = 38$  complete boxes. Check:  $12 \times 38 = 456$ .
- Choice A is correct.** (5.NO.NBT.6)  $V = 9 \times 6 \times 7 = 378$  cm<sup>3</sup>.
- Choice C is correct.** (5.GM.M.3) The top-right vertex is 9 units to the right of the origin and 4 units up, so its ordered pair is (9, 4).
- The correct answer is 21.** (5.AR.OA.2) First simplify the parentheses:  $6 + 2 = 8$ . Then  $48 \div 8 = 6$  and  $5 \times 3 = 15$ , so the total is  $6 + 15 = 21$ .
- Choices A, C are correct.** (5.AR.OA.2) A is true because  $20 + 1$  creates one extra group of 5. C is true because  $100 - 1$  creates one fewer group of 9 than 100 groups. B changes the grouping, and D is equal rather than greater.
- Choice B is correct.** (5.NO.NF.3) Add:  $\frac{5}{6} + 2\frac{1}{6} = 2\frac{6}{6} = 3$ .
- Choice A is correct.** (5.NO.NF.4) Start with one unit fraction,  $\frac{1}{5}$ , and share it into 3 equal parts. Each part is  $\frac{1}{5} \div 3 = \frac{1}{15}$  of the whole.
- Choice C is correct.** (5.NO.NBT.7) Multiplying by a power of 10 shifts the value to a larger place.  $10^2 = 100$ , so  $7 \times 100 = 700$ . This confirms the answer.
- Choice D is correct.** (5.NO.NBT.7) The base area is 72 square centimeters. Since  $432 \div 72 = 6$ , the height is 6 cm.
- Choice A is correct.** (5.GM.M.3) The overlap region has 2 shaded squares out of 20 total squares, giving  $\frac{1}{4} \times \frac{2}{5} = \frac{2}{20} = \frac{1}{10}$ .
- The correct answer is 17 more.** (5.AR.OA.3) The expression  $(8 + 4) + 17$  is exactly  $(8 + 4)$  with 17 added. Accept equivalent wording that says the value is 17 more, including that 17 is added after finding  $8 + 4$ .
- Choice C is correct.** (5.AR.OA.3) The correct answer is  $7.30 - 2.15 = 5.15$ . The student got 6.15, which shows the ones were subtracted incorrectly:  $7 - 2$  should be 5, not 6.



### A Mentor's Quiet Encouragement

---

#### To My Thoughtful Student,

◇ I want to take a moment, away from the noise of practice, to tell you something true: you have done excellent work. 9 practice tests is a real commitment. Most students do not finish what they start. You did. ◇

★ **What mentors notice:** growth is quiet. It doesn't shout. But it shows up in how you tackle a problem today versus how you tackled it weeks ago. That growth is your real prize. ★

#### What I See In You

- **Determination:** DEEP. You don't quit when problems get tough.
- **Curiosity:** BRIGHT. You wonder why and how, not just "what's the answer."
- **Self-Awareness:** REAL. You know what you understand and what you're learning.
- **Kindness:** CONSISTENT. You're patient with yourself.

**Mentor's note:** on test day, treat yourself like you'd treat a friend. Be patient. Be encouraging. Be kind. The same skills that helped you finish 9 tests will carry you through the real one.

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

**Jay Daie**

Your Math Mentor (Quietly Cheering)

# PRACTICE MORE. ACHIEVE MORE.

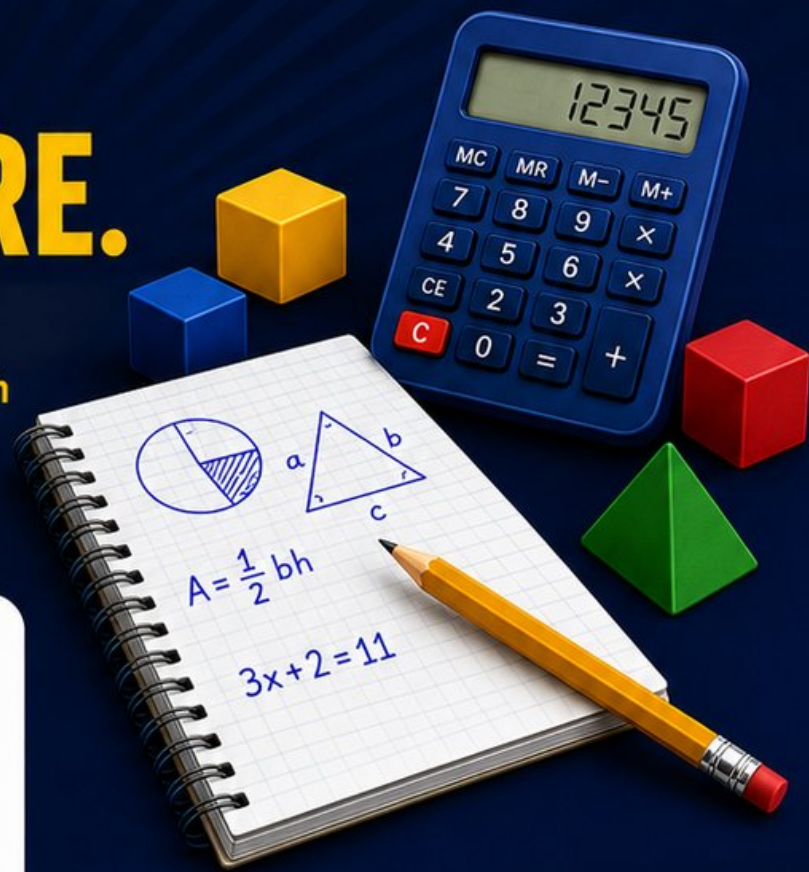
Give your child the edge they need to excel in **Grade 5 Math!** This book includes **9 full-length** practice tests designed to build confidence, sharpen skills, and improve test performance.

# 9

**FULL-LENGTH  
PRACTICE  
TESTS**

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

More practice today for a **stronger** tomorrow.



## THIS BOOK HELPS YOUR CHILD:



### 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!



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

for more Grade 5 math resources and practice materials!



Aligned to Standards



Created by Educators



Trusted by Parents & Teachers