

$\frac{2}{3}$

FULL-LENGTH

$\frac{2}{4}$

Tennessee

$7 \times 8 =$

$0,25$



Aligned to State Standards

TCAP

7×8

$56 \div 7$

MATH

Grade

5

$(a+b)^2$

PRACTICE TESTS

Complete State Standards Review
with Answer Key and
Essential Math Skills Practice



3 Full-Length Practice Tests
Aligned to State Standards



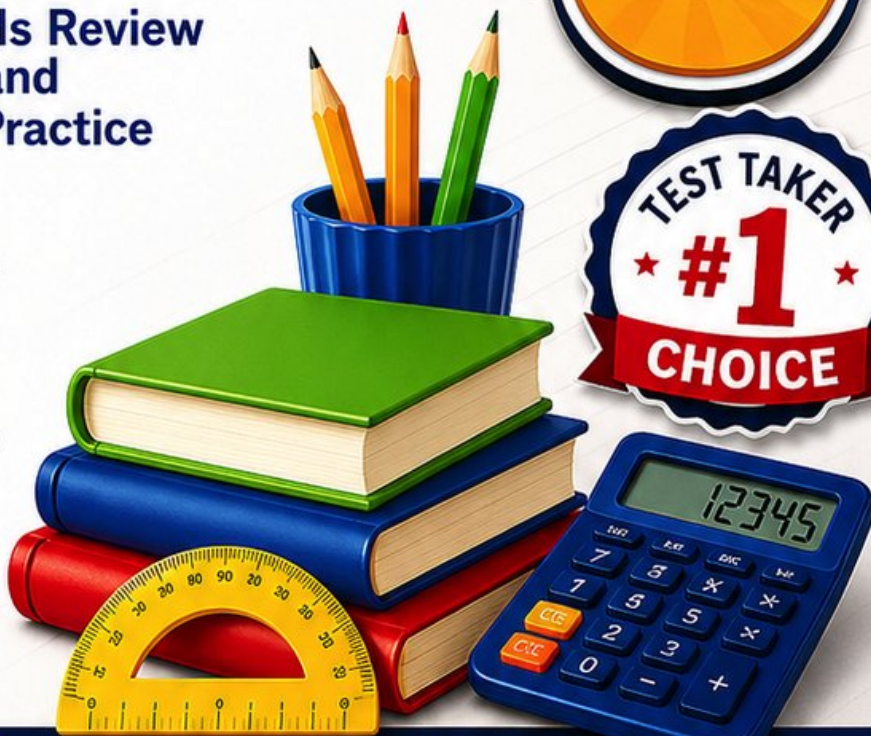
Covers All Grade 5 Math Topics
Numbers & Operations, Fractions,
Decimals, Geometry, Measurement,
Data & Problem Solving



Build Confidence
Strengthen Skills • Improve Accuracy
• Boost Test Readiness



Detailed Answer Key
Step-by-Step Explanations
for All Questions



WRITTEN FOR
GRADE 5 STUDENTS



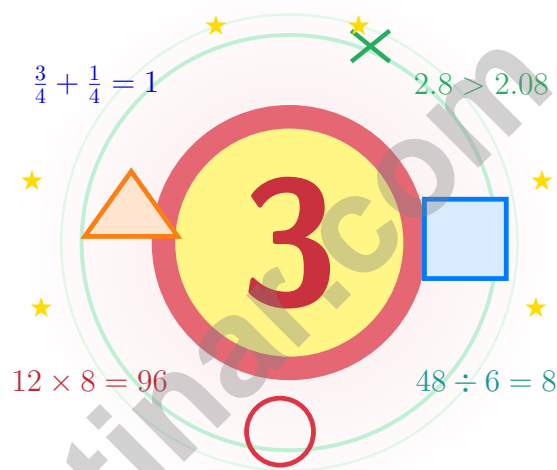
PERFECT FOR
TEST PREP & REVIEW



CLASSROOM, HOME,
OR SELF-STUDY USE

3 Tennessee TCAP Grade 5 Math Practice Tests

Volunteer-state math for thinkers who try and try again



Three full tests, a friendly quick review, smart strategy pages, and student-tested support that help Grade 5 mathematicians from The Volunteer State walk in ready to think.

Jay Daie and Reza Nazari



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Tennessee, This Book Is for You

Volunteer-state math for thinkers who try and try again

Welcome Letter for Tennessee Math Students

Math practice rolls like the Tennessee River – it bends, it widens, it keeps going, and so do you.

Some questions will feel easy from the very first read. Others will ask you to pause, sketch, estimate, or try again. That is not a problem. That is practice doing exactly what it should do. Every honest attempt grows your math brain a little stronger.

Look

Look at the problem
like a detective looks at
a clue.

Test

Test your idea with one
careful step at a time.

Grow

Grow stronger by
reviewing exactly what
tripped you up.

A Tennessee promise to yourself: I will volunteer for the harder problem and let practice teach me the rest.

A Map of the Pages

A simple game plan that turns practice into real progress

Step 1: Read

Read the quick review pages first.
Wake up the big Grade 5 ideas before the test starts so your brain is already warmed up.

Step 2: Try

Try one test with full attention.
Find a calm corner, settle in, and aim for careful, honest choices before quick ones.

Step 3: Reflect

Reflect on which skills want more sunlight.
Circle missed questions, sort out what went sideways, and notice which skills are calling for more attention.

Step 4: Lift

Lift those skills with practice before test 2.
Read the explanation, fix the work, and carry that lesson forward into the next test.

21 Days to Test Day

Week 1	Use Test 1 to scout the territory.
Week 2	Use Test 2 to repair the trail.
Week 3	Use Test 3 to walk it cleanly from start to finish.



Scan me

Three-Test Walkthrough

What these practice tests help Grade 5 students build

These three practice tests prepare Grade 5 students in the Volunteer State for the Tennessee TCAP with the steady spirit of a Smoky Mountain hike. The goal is bigger than getting answers right. Students are practicing how to read with care, choose a strategy, solve step by step, and explain their reasoning clearly – the same way mathematicians do every single day.

Selected-Response Questions

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

Constructed-Response Questions

Students show their steps, explain a method, or back up an answer with clear math. Clean reasoning matters because it shows how the answer was actually 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
- line plots, tables, numerical patterns, and coordinate points
- geometry and multi-step real-world problems

What strong work looks like on the TCAP: the math is correct, the steps are readable, the labels and units match the problem, and the final answer truly answers 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) A table shows $(1, 4)$, $(2, 7)$, $(3, 10)$, $(4, ?)$. If the pattern continues, find the missing y :

- A. 12 C. 14
 B. 15 D. 13

2) A farmer harvests crops with varying yields per acre:



What is the total yield in pounds?

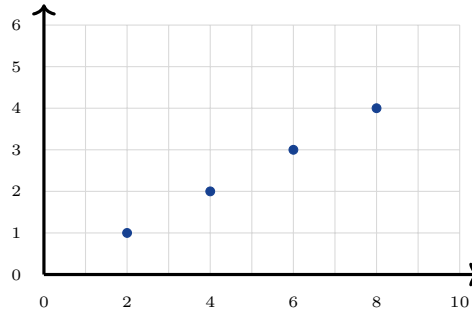
Add the pounds from all four acres.

- A. 950 pounds C. 850 pounds
 B. 900 pounds D. 1,000 pounds
- 3) Which product is between 5 and 6?

- A. $1\frac{1}{4} \times 4$ C. $2\frac{1}{2} \times 2$
 B. $1\frac{2}{3} \times 3$ D. $2\frac{3}{4} \times 2$



4) A pattern has points (2, 1), (4, 2), (6, 3), (8, 4). What is the rule?



- A. The second coordinate is 1 less than the first
- B. The second coordinate is half of the first
- C. The second coordinate is twice the first
- D. The second coordinate is 1 more than the first

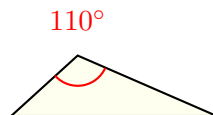
5) What is $0.3 \div 100$?

- A. 0.03
- B. 30
- C. 3
- D. 0.003

6) Which statement is false?

- A. $2.3 \times 10 = 23$
- B. $2.3 \times 100 = 230$
- C. $0.23 \times 100 = 23$
- D. $0.023 \times 1000 = 2.3$

7) Look at the triangle below. What type of angle is marked?



- A. Acute angle
- B. Right angle
- C. Obtuse angle
- D. Straight angle



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1) A poster is $\frac{8}{10}$ meter wide. You cut off $\frac{1}{4}$ of the width. What is the remaining width?

- A. $\frac{8}{40}$ meter
 B. $\frac{2}{10}$ meter

- C. $\frac{5}{10}$ meter
 D. $\frac{6}{10}$ meter

2) What is $7 \times \frac{1}{9}$?

- A. $\frac{9}{7}$
 B. $\frac{1}{63}$

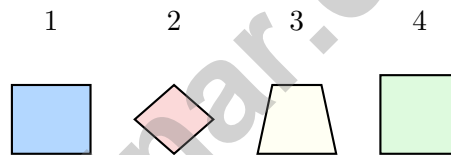
- C. $\frac{7}{2}$
 D. $\frac{7}{9}$

3) Which whole number divided by $\frac{1}{3}$ gives 12?

- A. 3
 B. 4

- C. 6
 D. 8

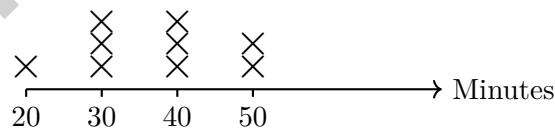
4) Teacher shows four shapes. One is NOT a parallelogram. Which should it be?



- A. Shape 1
 B. Shape 2

- C. Shape 3
 D. Shape 4

5) The line plot shows the number of minutes students practiced an instrument:



What is the total number of minutes all students practiced?

- A. 300 minutes
 B. 310 minutes

- C. 320 minutes
 D. 330 minutes



Grade 5 Mathematics Reference Materials

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- 1) Carol saw an expression on a sign: $(250 + 75) \times 2$. She reasoned the result must be more than $250 + 75$ but less than what?
- A. Less than $250 + 75$ C. Less than $\frac{1}{2} \times (250 + 75)$
 B. Less than $3 \times (250 + 75)$ D. Less than $(250 + 75) \div 2$
- 2) A sandwich shop has 8 pounds of turkey. Each sandwich uses $\frac{1}{4}$ pound. How many sandwiches can be made?
- A. 32 sandwiches C. 48 sandwiches
 B. 24 sandwiches D. 64 sandwiches
- 3) A runner training for a race completed 8.75 miles. She plans to run 12.5 miles. How many miles are left?
- A. 3.85 miles C. 4.15 miles
 B. 3.95 miles D. 3.75 miles
- 4) A school bought 12 boxes of colored pencils. Each box contains 24 pencils. How many pencils did the school buy?
- A. 276 C. 300
 B. 288 D. 312



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.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice D is correct.** (5.G.A.2) Each output increases by 3. For input 4, $3 \times 4 + 1 = 13$.
- Choice A is correct.** (5.MD.A.1) Add the four yields: $200 + 250 + 225 + 275 = 950$ pounds. Keeping the same unit makes the total easy to compare.
- Choice D is correct.** (5.NF.B.4) A, B, and D each equal 5. C gives $\frac{11}{4} \times 2 = \frac{11}{2} = 5\frac{1}{2}$, which is between 5 and 6.
- Choice B is correct.** (5.G.A.2) For each point: $2/2 = 1$, $4/2 = 2$, $6/2 = 3$, $8/2 = 4$. The y -value is half the x -value.
- Choice D is correct.** (5.NBT.A.2) Dividing by 100 moves the decimal 2 places left: $0.3 \rightarrow 0.03 \rightarrow 0.003$.
- Choice D is correct.** (5.NBT.A.2) Option D is false because $0.023 \times 1000 = 23$. The others are correct.
- Choice C is correct.** (5.G.B.3) An obtuse angle measures more than 90° but less than 180° . This angle is 110° .
- Choice C is correct.** (5.NF.B.4) $\frac{1}{6} \div 2 = \frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$.
- Choice D is correct.** (5.NBT.A.3) All have ones place = 5. Compare tenths: 5.001 and 5.01 have 0; 5.1 and 5.11 have 1. Then hundredths and thousandths refine order.
- Choice C is correct.** (5.MD.A.1) Choose the operation from the story, then keep the unit with the answer. Subtract: $64.75 - 8.50 = 56.25$ dollars. This confirms the answer.
- The correct answer is about 1.** (5.NF.A.2) $\frac{11}{12} \approx 1$ and $\frac{1}{8} \approx 0$, so the estimate is about 1. Accept reasonable estimates close to 1, such as $\frac{9}{10}$, 0.9, or 1.
- Choice A is correct.** (5.NBT.B.7) Subtract: $5.72 - 2.45 = 3.27$. Check: $2.45 + 3.27 = 5.72$.
- The correct answer is 42.** (5.OA.A.1) Do the multiplications first: $8 \times 6 = 48$ and $2 \times 5 = 10$. Then subtract left to right: $100 - 48 - 10 = 42$.
- Choice B is correct.** (5.MD.C.4) Base area: $6 \times 5 = 30$ square units. Total volume: $30 \times 8 = 240$ cubic units.
- Choice D is correct.** (5.NBT.B.7) 5.4 has 1 decimal place. $54 \times 3 = 162$, so we move the decimal 1 place left: 16.2.
- Choice D is correct.** (5.G.A.2) The first coordinate, 8, matches the x -axis label: laps completed. The second coordinate, 16, matches the y -axis label: minutes elapsed. So the point means minutes elapsed is 16 when laps completed is 8.
- Choice C is correct.** (5.MD.C.5) The base layer has $5 \times 3 = 15$ square units. Divide the volume by the base area: $30 \div 15 = 2$, so the height is 2 feet.
- Choice D is correct.** (5.NBT.B.7) The tenths digit is 7. Since $7 \geq 5$, round ones up: $92 \rightarrow 93$. The test score rounds to 93.
- Choice B is correct.** (5.MD.A.1) Convert to meters to compare clearly: 20 mm = 0.02 m, 250 cm = 2.5 m, and 2 km = 2,000 m. So the order is 20 mm < 2 m < 250 cm < 2 km.
- Choice C is correct.** (5.NBT.A.2) There are two factors of 10, so the decimal moves two places right altogether: $0.6 \rightarrow 6 \rightarrow 60$.
- Choice A is correct.** (5.OA.A.2) A quarter of the sum is less than the original sum, and three times the sum is greater than the original sum. So the quarter is smallest, the sum is in the middle, and the triple is largest.
- Choices A, B are correct.** (5.OA.A.2) A and B both start with twice 9 and then take away 7. C puts the 7 first, and D subtracts before doubling, so those do not match the words.
- Choice A is correct.** (5.NF.A.2) LCD = 24. $\frac{5}{8} = \frac{15}{24}$; $\frac{1}{3} = \frac{8}{24}$. $\frac{15}{24} - \frac{8}{24} = \frac{7}{24}$.
- Choice D is correct.** (5.NBT.A.1) Multiplying 0.07 by 10 shifts the decimal point one place to the right: $0.07 \times 10 = 0.7$.
- The correct answer is equilateral.** (5.G.B.3) The side lengths are 5 cm, 5 cm, and 5 cm, so all 3 sides are equal. The triangle is equilateral.
- Choice B is correct.** (5.NF.A.1) Add: $\frac{9}{10} + 4\frac{1}{10} = 5$.
- Choice B is correct.** (5.MD.C.4) Prism B has volume $7 \times 4 \times 4 = 112$ cubic units, which is the greatest.
- Choice A is correct.** (5.NF.A.2) Common denominator 6: $\frac{1}{6} + \frac{1}{3} = \frac{1}{6} + \frac{2}{6} = \frac{3}{6} = \frac{1}{2}$ cup.
- The correct answer is 8 cm.** (5.MD.C.4) Divide the volume by the base area: $240 \div 30 = 8$, so the height is 8 cm.
- Choice B is correct.** (5.NBT.A.2) When dividing by 10, each digit moves to a place with one-tenth the value, so 640 becomes 64.



Case Closed: Success Ahead

Greetings, Math Detective!

◇ Outstanding investigation! You've cracked the code on 3 complete practice tests, examining every clue and solving every mathematical mystery like a brilliant detective! Each problem was a puzzle, and you methodically gathered evidence, analyzed patterns, and reached accurate conclusions. That analytical thinking you've developed will serve you well on test day and beyond! ◇

★ **Here's what master detectives know:** not every case solves itself immediately. Sometimes you need to examine the evidence from different angles, try various approaches, and remain persistent until you crack the code. You've practiced exactly that through these 3 tests! Your investigative skills have sharpened considerably, and you're ready to solve any mathematical mystery that comes your way! ★

Detective's Case File: Your Skills

- **Clue Collection:** You gather all important information from problems before solving!
- **Pattern Recognition:** You identify mathematical patterns like a trained investigator!
- **Evidence Analysis:** You evaluate which strategies work best for each problem type!
- **Case Resolution:** You stay focused until you've found the correct solution!

Detective wisdom: the best investigators take notes about their methods so they can solve similar cases faster in the future. Your brain has been doing exactly that throughout these 3 tests, storing successful strategies in your mental filing cabinet. On test day, you'll be able to retrieve those proven methods instantly!

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 Detective Coach

Build Skills. Boost Confidence. Excel on the Grade 5 Math Test.

Help your child succeed with confidence! This book includes **3 full-length Grade 5 Math practice tests** aligned to state standards. With a focus on essential skills, problem solving, and test readiness, it's the perfect resource for classroom, home, or on-the-go practice.



WHAT'S INSIDE:



3 Full-Length Grade 5 Math Practice Tests

Realistic test format to build familiarity and confidence.



Covers All Essential Math Topics

Fractions, decimals, geometry, measurement, data, number operations, and more.



Build Strong Math Skills

Strengthen understanding and problem-solving through varied question types.



Detailed Answer Key

Step-by-step explanations to help your child learn from mistakes and improve.



Track Progress & Improve

Use score trackers to identify strengths and focus on areas that need more practice.



The Smarter Way to Prepare!

Consistent practice builds stronger skills, sharper thinking, and test-day success.

- ✓ Reinforce classroom learning
- ✓ Improve accuracy and speed
- ✓ Reduce test anxiety
- ✓ Achieve your best score!



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