



6

Tennessee TCAP

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

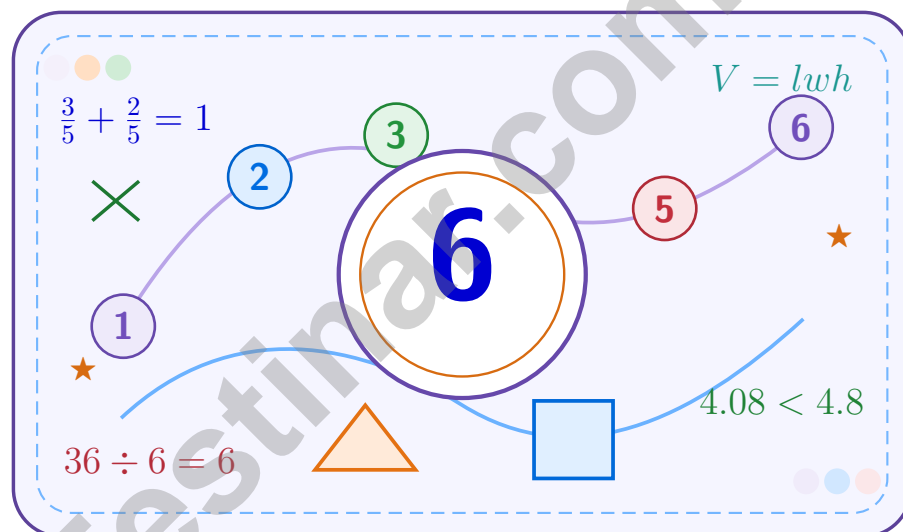


BUILD CONFIDENCE. IMPROVE SCORES.
Target weak areas and achieve success

★ STRONG PRACTICE. BRIGHT FUTURE. ★

6 Tennessee TCAP 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
Week 1	Take Test 1 and review any place-value or operation slips.
Week 2	Take Test 2 and focus on showing neat, easy-to-read work.
Week 3	Take Test 3 and give extra time to fractions or decimals if needed.
Week 4	Take Test 4 and slow down on word problems and units.
Week 5	Take Test 5 and compare your score and habits with earlier rounds.
Week 6	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 Tennessee TCAP. 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)

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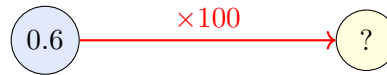
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1 day = 24 hours (hr) 1 year = 52 weeks



- 1) Arrow diagram: start at 0.6, multiply by 100. Where do you land?



- A. 6
- B. 0.60
- C. 600
- D. 60
- 2) A student walks 0.6 kilometers to school every day. How far does the student walk in 5 school days?

- A. 2.5 km
- B. 3.5 km
- C. 3.0 km
- D. 4.0 km

- 3) The figures below are labeled A-D. Which figure is a parallelogram but not a rectangle?



- A. Figure A
- B. Figure B
- C. Figure C
- D. Figure D
- 4) Estimate: $7\frac{1}{12} + 2\frac{11}{12}$.
- A. 9
- B. 10
- C. 11
- D. 12
- 5) A water tank contains $\frac{1}{8}$ of a litre. The water is to be equally distributed to 4 containers. How much water goes in each container?

- A. $\frac{1}{2}$ litre
- B. $\frac{1}{4}$ litre
- C. $\frac{1}{32}$ litre
- D. $\frac{1}{12}$ litre



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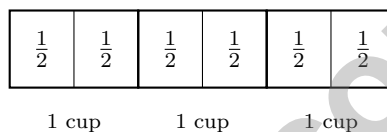
Property	Figures with this property
All sides equal	Rhombus, Square
All angles 90°	Rectangle, Square
Two pairs of parallel sides	Parallelogram, Rectangle, Rhombus, Square

1)

Based on the table, which is a special type of both a rectangle and a rhombus?

- A. Parallelogram C. Square
 B. Trapezoid D. Pentagon

2) How many one-half cups are in 3 cups?



3 cups split into half-cup portions

- A. 9 C. 3
 B. 6 D. 12

3) Which rectangular prism has a volume of 120 cubic units?

Prism	Length	Width	Height
A	10	4	3
B	6	5	5
C	8	5	4
D	12	3	2

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



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1) Pattern table: Fill in the missing value.

Expression	Number of Zeros
11×10	1
11×100	2
$11 \times 1,000$	3
$11 \times 10,000$?

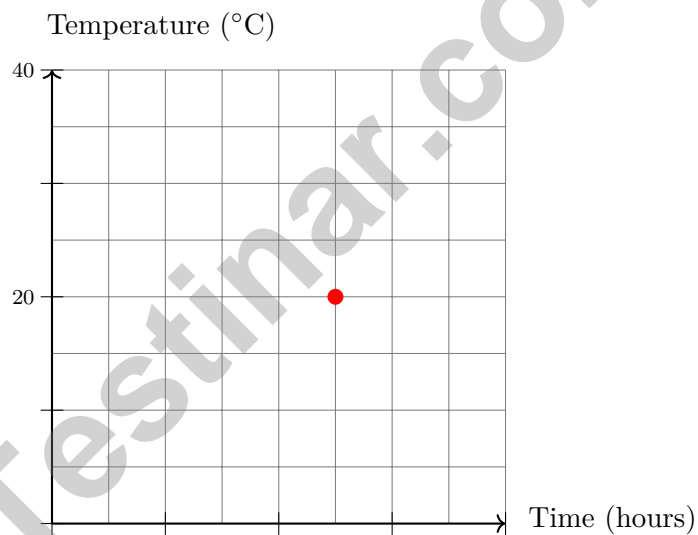
A. 6

C. 3

B. 5

D. 4

2) On a grid, the y-axis represents “Temperature ($^{\circ}\text{C}$)” and the x-axis represents “Time (hours).” What does a point at the coordinates (5, 20) tell you?



A. 20 hours with a temperature of 5°C

C. 20°C drop over 5 hours

B. At 5 hours, the temperature is 20°C

D. Temperature at 25 hours



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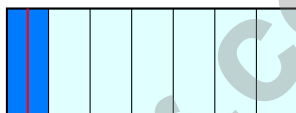
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- 1) A student says $1.75 + 2.38 = 3.113$. What is the main error?
- A. The student forgot to regroup 113 hundredths.
- B. The student should have rounded before adding.
- C. The student got 4.13, which is correct.
- D. The student should have subtracted instead of added.
- 2) Kim has \$50. She buys 3 notebooks at \$8 each and a pen at \$4. Which expression shows her money left?
- A. $50 - 3 \times 8 - 4$
- B. $(50 - 3) \times 8 - 4$
- C. $50 - (3 + 8 + 4)$
- D. $3 \times 8 + 4 - 50$
- 3) What is $\frac{1}{7} \div 2$?



Whole divided into sevenths; one seventh split in 2

- A. $\frac{2}{7}$
- B. $\frac{7}{2}$
- C. $\frac{1}{5}$
- D. $\frac{1}{14}$
- 4) Carla saved 8,400 pennies over several years. She converts the pennies to dollars. Since 100 pennies make \$1, how many dollars does she have?
- A. \$8.40
- B. \$84
- C. \$840
- D. \$84,000
- 5) Write the multiplication as a power of 10. $____ \times 100 = 3.7$. What is the missing number?
- A. 0.037
- B. 0.37
- C. 37
- D. 370



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

- 1) **Choice D is correct.** **(5.NBT.A.2)** $0.6 \times 100 = 60$ (move decimal 2 places right).
- 2) **Choice C is correct.** **(5.MD.A.1)** Choose the operation from the story, then keep the unit with the answer. Multiply: $0.6 \times 5 = 3.0$ kilometers. This confirms the answer.
- 3) **Choice D is correct.** **(5.G.B.3)** Figure D is a rhombus with no right angles. It has two pairs of parallel sides, so it is a parallelogram, but it is not a rectangle.
- 4) **Choice B is correct.** **(5.NF.A.2)** $7\frac{1}{12} \approx 7$ and $2\frac{11}{12} \approx 3$. So $7\frac{1}{12} + 2\frac{11}{12} \approx 7 + 3 = 10$.
- 5) **Choice C is correct.** **(5.NF.B.4)** $\frac{1}{8} \div 4 = \frac{1}{8} \times \frac{1}{4} = \frac{1}{32}$.
- 6) **Choice B is correct.** **(5.NF.A.2)** To add fractions, first rewrite with a common denominator: $\frac{1}{2} = \frac{3}{6}$ and $\frac{1}{3} = \frac{2}{6}$, giving $\frac{5}{6}$.
- 7) **Choice A is correct.** **(5.NBT.A.3)** 55 out of 100 squares shaded represents $\frac{55}{100} = 0.55$.
- 8) **Choice D is correct.** **(5.NF.B.4)** $\frac{7}{8} \times 2 = \frac{14}{8} = 1\frac{6}{8} = 1\frac{3}{4}$ (simplified).
- 9) **The correct answer is 72 cm³.** **(5.MD.C.4)** Multiply the three dimensions: $6 \times 4 \times 3 = 72$ cm³.
- 10) **Choice D is correct.** **(5.G.A.2)** First ordered pair: (Pattern 1 first value, Pattern 2 first value) = (5, 2).
- 11) **Choice C is correct.** **(5.NF.A.1)** $9\frac{3}{4} - 4\frac{2}{4} = 5\frac{1}{4}$ gal.
- 12) **The correct answer is 3.** **(5.G.A.1)** For nonzero terms, $9 \div 3 = 3$, $18 \div 6 = 3$, and so on.
- 13) **The correct answer is $3\frac{5}{8}$.** **(5.NF.A.1)** $1 + 2 = 3$. $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$. Total: $3\frac{5}{8}$.
- 14) **Choice A is correct.** **(5.NF.B.6)** This asks for $\frac{1}{2}$ of $\frac{3}{4}$ pound, so multiply: $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$ pound.
- 15) **Choice C is correct.** **(5.NBT.A.2)** Making one-tenth (dividing by 10): $2.4 \div 10 = 0.24$ cups of flour.
- 16) **Choice C is correct.** **(5.MD.B.2)** There are two 1-yard ribbons, for 2 yards total. There is one $\frac{1}{4}$ -yard ribbon. The difference is $2 - \frac{1}{4} = 1\frac{3}{4}$ yards.
- 17) **Choice D is correct.** **(5.MD.C.3)** A cube with side length 4 cm has 4 layers of $4 \times 4 = 16$ cubic centimeters each. So $16 \times 4 = 64$ cubic centimeters.
- 18) **Choice B is correct.** **(5.G.B.3)** A square has two pairs of opposite sides parallel, which makes it a parallelogram. In fact, a square is a special type of parallelogram.
- 19) **Choices A, B are correct.** **(5.NF.A.2)** A and B are equivalent to $\frac{3}{4}$ because the numerator and denominator were multiplied by the same factor. C and D do not reduce to $\frac{3}{4}$.
- 20) **Choice C is correct.** **(5.G.A.1)** Point U is at (5, 5), with both coordinates positive.
- 21) **Choice A is correct.** **(5.MD.A.1)** The overlap has $\frac{5}{6} \times \frac{2}{3} = \frac{10}{18}$, which is 10 squares out of 18 total.
- 22) **Choice C is correct.** **(5.OA.A.1)** First find the value inside the parentheses: $4 + 6 = 10$. Then $3 \times 10 = 30$, and $60 - 30 = 30$.
- 23) **Choice B is correct.** **(5.MD.C.3)** Find each part first: Prism A is $5 \times 4 \times 2 = 40$ cubic inches, and Prism B is $6 \times 4 \times 1 = 24$ cubic inches. Because the parts do not overlap, add them: $40 + 24 = 64$ cubic inches.
- 24) **Choice D is correct.** **(5.NBT.A.2)** Each term is one-tenth of the term before it: $500 \rightarrow 50 \rightarrow 5 \rightarrow 0.5$. The rule is divide by 10 each time.
- 25) **Choice D is correct.** **(5.NBT.A.2)** There are 34 groups of 10 items, so multiply $34 \times 10 = 340$. Multiplying by 10 shifts the digits one place to the left in the place-value chart.
- 26) **Choice C is correct.** **(5.OA.A.1)** The grouping symbols help you find the bracket value first: $(6 + 2) \div 4 = 8 \div 4 = 2$. Inside the braces, multiplication comes before addition, so the next step is 4×2 .
- 27) **The correct answer is 32448.** **(5.NBT.B.5)** $507 \times 4 = 2,028$ and $507 \times 60 = 30,420$. Sum: $2,028 + 30,420 = 32,448$.
- 28) **Choice D is correct.** **(5.MD.A.1)** Add the liquid amounts first: $1.5 + 2 = 3.5$ cups. Since each cup is 8 fluid ounces, $3.5 \times 8 = 28$ fluid ounces.
- 29) **Choice A is correct.** **(5.NBT.B.6)** If $816 \div 17 = 48$, then 408 (half of 816) divided by 17 gives half the quotient: $408 \div 17 = 24$.



Laboratory Research Summary

Greetings, Research Scientist!

★ Exceptional research completed! You've conducted six comprehensive mathematical experiments, collecting data, analyzing results, and drawing accurate conclusions like a professional scientist! Each test represented a controlled experiment where you tested your hypotheses, recorded observations, and refined your methodologies. Your scientific approach to problem-solving has developed remarkably! ★

◇ **Here's what accomplished scientists understand:** research requires careful observation, precise measurement, and systematic analysis. They document their procedures so they can replicate successful experiments. You've developed those same scientific practices through these six tests! You've documented (mentally) which strategies work best, and now you can replicate that success on test day! ◇

Research Laboratory Findings

- **Hypothesis Testing:** You systematically evaluate which approaches work best!
- **Data Analysis:** You examine information carefully before drawing conclusions!
- **Experimental Control:** You maintain focus and accuracy throughout testing!
- **Research Complete:** Your findings confirm readiness for test day experimentation!

Remember this scientific principle: careful scientists verify their results before publishing findings. On test day, apply that same careful verification to your work. Double-check your calculations, confirm your answers make sense, and submit your best work. You've practiced the scientific method six times; trust your research skills!

Want to publish your mathematical research findings or discuss an interesting problem-solving hypothesis? Submit your papers to reza@testinar.com. The journal awaits your contributions!

Reza Nazari & Jay Daie

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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.



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!



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