

10 Tennessee TCAP

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned Problem
Solving For Comprehensive
Assessment Programs



10 PRINTED TESTS

Realistic practice to build
confidence and mastery



2 ONLINE TESTS

Extra practice for
continued success



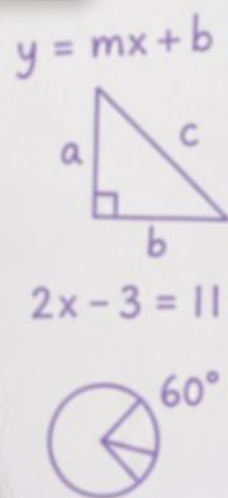
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



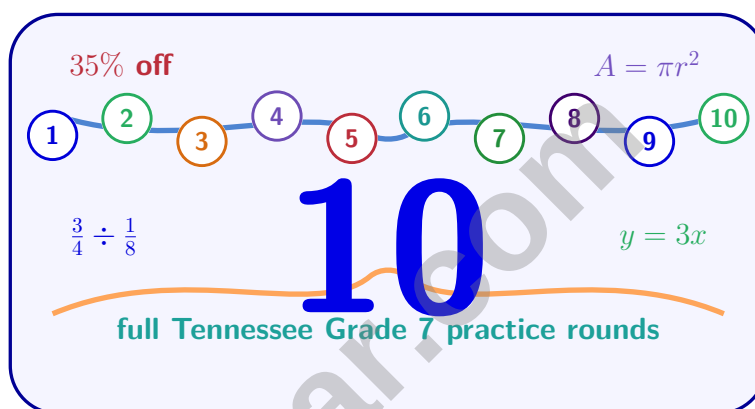
10 PRINTED TESTS
+2 ONLINE TESTS

Use these two additional online practice
tests for extra review after the printed
tests in this book.

PRACTICE ★ REVIEW ★ SUCCEED

10 Tennessee TCAP Grade 7 Math Practice Tests

Tennessee Grade 7 TCAP Practice for music-steady review for proportional relationships, equations, rational numbers, geometry, and data



Ten complete 40-question Grade 7 TCAP practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



Copyright ©

Testinar Inc



Published by Testinar Inc

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, Tennessee Grade 7 Problem Solver!

Ten focused rounds for sharper Tennessee TCAP math thinking

This book gives you ten full Grade 7 TCAP math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Tennessee Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A ten-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Tennessee review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Ten Tennessee TCAP tests, 400 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, and multi-step problem solving.
Tests 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final Tennessee round to show growth across the whole book.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	11
★ Practice Test 2	_____	25
★ Practice Test 3	_____	39
★ Practice Test 4	_____	54
★ Practice Test 5	_____	68
★ Practice Test 6	_____	82
★ Practice Test 7	_____	97
★ Practice Test 8	_____	112
★ Practice Test 9	_____	126
★ Practice Test 10	_____	142
Practice Test Answer Keys	_____	157
Practice Test Answers and Explanations	_____	163

- 1) A spinner is divided into 8 equal sections. 2 sections are labeled “Win”, 3 are labeled “Lose”, and 3 are labeled “Try Again”. What is the probability of spinning “Win”?

☐ A. $\frac{1}{8}$
☐ B. $\frac{1}{4}$

☐ C. $\frac{3}{8}$
☐ D. $\frac{1}{2}$

- 2) A recipe uses 2.25 cups of sugar. If the recipe is doubled, how much sugar is needed?

☐ A. 2.25 cups
☐ B. 3.25 cups

☐ C. 4.5 cups
☐ D. 6.75 cups

- 3) A square patio has a perimeter of 24 meters. What is its area?

☐ A. 24 m^2
☐ B. 36 m^2

☐ C. 48 m^2
☐ D. 144 m^2

- 4) Which number, when written in scientific notation, has an exponent of -4 ?

☐ A. 0.00068
☐ B. 0.000068

☐ C. 68,000
☐ D. 680,000

- 5) A circle graph shows the breakdown of how students spend their day: Sleep 33%, School 25%, Homework 17%, Recreation 15%, Other 10%. If a student sleeps 8 hours, how many hours does the student spend in school (assuming the percentages hold)?

☐ A. 4 hours
☐ B. 6 hours

☐ C. 8 hours
☐ D. 10 hours

- 6) If a circle has a diameter of 26 meters, what is the length of its radius?



Scan me!
For more practice
& answers

7) A pizza place offers 3 types of crust, 6 sauce options, and 8 toppings. How many single-topping pizzas can be made?

☐ A. 17

☐ C. 72

☐ B. 42

☐ D. 144

8) A die is rolled and a spinner with 6 equal sections is spun. What is the probability of rolling a number greater than 2 AND spinning a number less than 4?

☐ A. $\frac{1}{3}$
☐ C. $\frac{2}{3}$
☐ B. $\frac{8}{36}$
☐ D. $\frac{4}{9}$

9) A spinner with 4 equal sections was spun 360 times. The results are displayed in a frequency table:

Section	Red	Blue	Green	Yellow
Frequency	95	88	92	85

How does the experimental probability of landing on red compare to the theoretical probability of $\frac{1}{4}$?

☐ A. Experimental is higher

☐ C. Both are exactly equal

☐ B. Experimental is lower

☐ D. Cannot compare without more data

10) A photographer estimated 180 photos would be taken at an event, but 200 were actually taken. What is the percent error?

☐ A. 20%

☐ C. 11.1%

☐ B. 9%

☐ D. 10%


- 11) A cylindrical water tank has a radius of 2.5 meters and a height of 8 meters. Find the volume of the tank in cubic meters. Use $\pi \approx 3.14$.

- 12) Expand: $-\frac{1}{2}(6x - 4)$

☐ A. $-3x + 2$

☐ C. $3x - 2$

☐ B. $-3x - 2$

☐ D. $-3x - 4$

- 13) When subtracting a negative number, why do we add its opposite instead?

☐ A. Because subtraction and addition are the same operation☐ C. To make the problem easier to solve☐ B. Because subtracting the opposite of a number is equivalent to adding the number itself☐ D. Because negative numbers cannot be subtracted

- 14) The width of a room on a floor plan is 2 inches. The actual room is 20 feet wide. What is the scale of the floor plan?

☐ A. 2 inches : 1 foot☐ C. 1 inch : 10 feet☐ B. 1 inch : 1 foot☐ D. 1 inch : 20 feet

Scan me!

For more practice
& answers

- 1) A store sells 120 items in one day. If 30% of them were on sale, how many items were on sale?

☐ A. 30 ☐ C. 40
☐ B. 90 ☐ D. 36

- 2) A scientist measures plant stem diameters (mm) and displays them in a stem-and-leaf plot:

Stem	Leaves
1	4, 7
2	1, 5, 8
3	2, 4, 6, 9

The lower quartile (Q1) falls between which two values?

☐ A. 17 and 21 ☐ C. 25 and 28
☐ B. 21 and 25 ☐ D. 28 and 32

- 3) Two prisms have the same height of 10 cm. The first has a rectangular base 4 cm by 3 cm. The second has a triangular base with area 6 cm². Which prism has a larger volume?

☐ A. The rectangular prism ☐ C. Both have the same volume
☐ B. The triangular prism ☐ D. Cannot be determined

- 4) Expand: $(4a + 6) \cdot \frac{1}{2}$

☐ A. $2a + 6$ ☐ C. $4a + 3$
☐ B. $2a + 3$ ☐ D. $a + 6$



5) Simplify: $7a + 4b - 2a + 3b - b$

☐ A. $5a + 6b$

☐ C. $9a + 6b$

☐ B. $5a + 5b$

☐ D. $5a + 7b$

6) A cube has surface area 600 cm^2 . What is its edge length?

☐ A. 5 cm

☐ C. 100 cm

☐ B. 10 cm

☐ D. 3600 cm

7) In a survey of 500 people, 75 prefer online shopping while the rest prefer in-store shopping. What percent prefer online shopping?

☐ A. 15%

☐ C. 30%

☐ B. 25%

☐ D. 75%

Cost of Apples

Price per pound: \$1.50

Weight: w pounds

Total cost = ?

8)

☐ A. $1.50 + w$

☐ C. $\frac{w}{1.50}$

☐ B. $1.50w$

☐ D. $w - 1.50$

9) An item is on sale for \$48 after a 20% discount. What was the original price?



Scan me!
For more practice
& answers

- 1) A sports league starts with 40 teams. After expansion, it has 50 teams. What is the percent increase in the number of teams?
- ☐ A. 10% ☐ C. 25%
- ☐ B. 20% ☐ D. 80%
- 2) A restaurant surveyed 450 customers about their favorite dish. The circle graph shows pasta is 32%, chicken is 28%, fish is 22%, and vegetarian is 18%. How many customers prefer pasta?
- ☐ A. 32 ☐ C. 144
- ☐ B. 99 ☐ D. 288
- 3) An online retailer sends an email to all customers asking them to rate their shopping experience. Only 300 of the 10,000 customers respond. What is true about this sample?
- ☐ A. It is a stratified sample ☐ C. It is the population
- ☐ B. It has no bias because the email was sent to all customers ☐ D. It has low response rate and voluntary response bias
- 4) Which expression is equivalent to $\frac{k^7}{k^7}$?
- ☐ A. 0 ☐ C. 1
- ☐ B. k ☐ D. k^{14}
- 5) A librarian is setting up a reading challenge. Students earn 5 points for each book read and receive a 10-point bonus just for participating. If a student earned 75 points total, which equation represents b , the number of books read?
- ☐ A. $10 + 5b = 75$ ☐ C. $10b + 5 = 75$
- ☐ B. $5b + 10 = 75$ ☐ D. $5(b + 10) = 75$



6) Which pair of equations is equivalent (have the same solution)?

☐ A. $2x + 6 = 16$ and $2x = 8$

☐ C. $5x + 3 = 28$ and $5x = 25$

☐ B. $3x - 4 = 8$ and $3x = 4$

☐ D. $4x - 2 = 10$ and $4x = 14$

7)

Outcome	Red	Blue	Green
Probability	0.35	0.25	?

A probability model is shown. Find the probability of Green.

$4 \times$

$2x \quad -3$

8)

$$4(2x - 3) = 20$$

Solve for x : $4(2x - 3) = 20$

☐ A. $x = 1$

☐ C. $x = 3$

☐ B. $x = 2$

☐ D. $x = 4$

9) If $\frac{7}{x} = \frac{35}{100}$, what is x ?



Scan me!
For more practice
& answers

Tennessee TCAP Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 student:**

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Tennessee TCAP practice test.



Scan me!
For more practice
& answers

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.SP.5-7.SP.8) “Win” sections: 2 out of 8. $P(\text{Win}) = \frac{2}{8} = \frac{1}{4}$.
- 2) **Choice C is correct.** (7.EE.3-7.EE.4) Doubled amount = $2 \times 2.25 = 4.5$ cups.
- 3) **Choice B is correct.** (7.NS.1-7.NS.3) Perimeter = $4s = 24$, so $s = 6$ meters. Area = $s^2 = 6^2 = 36 \text{ m}^2$.
- 4) **Choice A is correct.** (7.NS.1-7.NS.3) $0.00068 = 6.8 \times 10^{-4}$ (move decimal 4 places right).
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) If sleep is $33\% = 8$ hours, then the total day is $\frac{8}{0.33} \approx 24$ hours. School is 25% of $24 = 0.25 \times 24 = 6$ hours.
- 6) **The correct answer is 13.** (7.G.4-7.G.6) Use $r = \frac{d}{2}$: $r = \frac{26}{2} = 13$ meters.
- 7) **Choice D is correct.** (7.SP.5-7.SP.8) By the counting principle: $3 \times 6 \times 8 = 144$ single-topping pizzas.
- 8) **Choice A is correct.** (7.SP.5-7.SP.8) Greater than 2 on die: 3, 4, 5, 6 = 4 out of 6, so $P = \frac{2}{3}$. Less than 4 on spinner: 1, 2, 3 = 3 out of 6, so $P = \frac{1}{2}$. Product: $\frac{2}{3} \cdot \frac{1}{2} = \frac{1}{3}$ (or $\frac{12}{36}$).
- 9) **Choice A is correct.** (7.SP.6) Experimental probability of red (relative frequency): $\frac{95}{360} \approx 0.264$. Theoretical (equal sections): $\frac{1}{4} = 0.25$. Random variation caused experimental to exceed theoretical.
- 10) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|180-200|}{200} \times 100\% = \frac{20}{200} \times 100\% = 10\%$.
- 11) **The correct answer is 157.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times (2.5)^2 \times 8 = 3.14 \times 6.25 \times 8 = 157 \text{ m}^3$.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute $-\frac{1}{2}$: $-\frac{1}{2}(6x) - \frac{1}{2}(-4) = -3x + 2$. Negative times negative is positive.
- 13) **Choice B is correct.** (7.NS.1-7.NS.3) The key principle (7.NS.1c): $a - (-b) = a + b$. This works because we are undoing a debt or reversing a loss. Choice B correctly identifies this conceptual principle.
- 14) **Choice C is correct.** (7.RP.1-7.RP.3) Divide actual by plan: $20 \text{ feet} \div 2 \text{ inches} = 10 \text{ feet per inch}$, so scale is 1 inch : 10 feet.
- 15) **Choice D is correct.** (7.RP.3) 70% of 80 is $0.70 \times 80 = 56$ students.
- 16) **Choice D is correct.** (7.RP.3) Markup = $0.60 \times 500 = \$300$. Selling price = $500 + 300 = \$800$.
- 17) **Choice D is correct.** (7.RP.3) Interest owed: $6500 - 5000 = \$1500$. $1500 = 5000 \times r \times 5 \Rightarrow 1500 = 25000r \Rightarrow r = 0.06 = 6\%$.
- 18) **Choice C is correct.** (7.NS.1b) Both numbers are positive. Add them directly: $14 + 11 = 25$.
- 19) **Choice B is correct.** (7.EE.1) Like terms have the same variable(s) and exponent(s). Both $-5ab$ and $3ab$ have the same variables and exponents.
- 20) **Choice C is correct.** (7.SP.1-7.SP.4) 30% of 1200 = $0.30 \times 1200 = 360$ people.
- 21) **Choice B is correct.** (7.EE.1-7.EE.2) The ratio is 2 cups flour per 1 cup sugar, so $f = 2s$.
- 22) **The correct answer is A,B.** (7.G.4-7.G.6) A is correct: volume $V = B \times h$ for any prism. B is correct: $V = 4^3 = 64 \text{ cm}^3$. C is false: doubling height doubles volume, not triples it. D is false: a triangular prism can have larger volume than a rectangular prism depending on dimensions.
- 23) **Choice C is correct.** (7.EE.1-7.EE.2) Check A: $-3(x+3) = -3x - 9$. Correct. Check B: $2(-y+4) = -2y + 8$. Correct. Check D: $-4(m+5) = -4m - 20$. Correct. Check C: $-5(a+3) = -5a - 15 \neq -5a + 15$. Incorrect. The correct factorization is $-5(a-3) = -5a + 15$.
- 24) **Choice D is correct.** (7.RP.1-7.RP.3) Cost equals price per item times number of items. Here $T = 0.50n$.
- 25) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $240 \div 8 = 30$ widgets per hour.
- 26) **Choice C is correct.** (7.NS.1-7.NS.3) $(-360) \div 4 = -90$ indicates each person's debt (or share) is \$90 (or $-\$90$ in ledger terms).
- 27) **Choice A is correct.** (7.NS.2d) Divide $5 \div 18 = 0.2777\ldots = 0.\overline{27}$. Since $18 = 2 \times 3^2$, the factor 3 causes repetition after the first digit.
- 28) **Choice A is correct.** (7.NS.1-7.NS.3) Distance: $12,718.5 - 12,450 = 268.5$ miles.
- 29) **Choice B is correct.** (7.NS.1-7.NS.3) Time = distance $\div$ rate. The diver descends 18 meters at 1.5 m/s: $18 \div 1.5 = 12$ seconds.



Scan me!
For more practice
& answers

Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

★ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ★

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Math Hero Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra online tests to help Grade 7 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

Perfect for classroom use, homework, test preparation, and extra practice at home.

THIS BOOK INCLUDES:

10 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answer Explanations



MORE PRACTICE. GREATER RESULTS.

Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

WHAT YOU'LL GAIN



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts with clear explanations and meaningful practice.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- ✓ Ratios & Proportions
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



2 EXTRA ONLINE TESTS

Use these two additional online practice tests for extra review after the printed tests in this book.



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

Don't lose it—your extra practice and success start here!



VISIT **TESTINAR.COM/MATH7**
FOR MORE PRACTICE TESTS
AND LEARNING RESOURCES.



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED