

8

Tennessee

TCAP

GRADE 7

MATH

PRACTICE TESTS



**Standards Aligned
Problem Solving**

For Comprehensive
Assessment Programs



**8 PRINTED
TESTS**



**2 ONLINE
TESTS**



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



BUILD CONFIDENCE



STRENGTHEN SKILLS



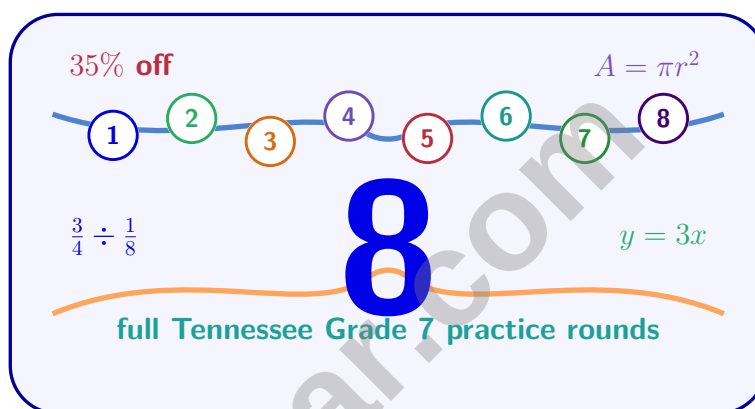
THINK SMARTER



BE TEST-READY

8 Tennessee TCAP Grade 7 Math Practice Tests

A precision review of Tennessee Grade 7 proportions, expressions, geometric reasoning, statistics, experimental probability, and simulations



Eight 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



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Welcome, Tennessee Grade 7 Problem Solver!

Eight focused rounds for sharper TCAP math thinking

This book gives you eight 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

An eight-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?

Eight TCAP tests, 320 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 7–8	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
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.



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1) An emergency fund is money set aside for unexpected expenses. Financial advisors recommend saving 3 to 6 months of living expenses. If your monthly expenses are \$2 000, what is the lower end of the recommended emergency fund?

☐ A. \$3 000

☐ C. \$8 000

☐ B. \$12 000

☐ D. \$6 000

2) A chemist mixes $\frac{3}{8}$ liter of solution A and $\frac{5}{8}$ liter of solution B. What is the total volume?

☐ A. $\frac{8}{16}$ liters

☐ C. $1\frac{1}{8}$ liters

☐ B. 1 liter

☐ D. $\frac{2}{8}$ liters

3) What is the value of 5^0 ?

☐ A. 0

☐ C. 5

☐ B. 1

☐ D. Undefined

4) A store gives a \$5 coupon for every 6 items purchased. If you buy x bundles of 6 items, each bundle costs \$8, and your total before coupon is \$48, which equation represents your savings per bundle?

☐ A. $6(8 - 5) = 18$

☐ C. $6(8) - 5 = 48$

☐ B. $x(8 - 5) = 48$

☐ D. $(8 - 5)x = 18$

5) A certificate of deposit starts with \$2,000 and earns 4% annual compound interest. After how many complete years will the balance first exceed \$2,500?



6)

n	$n - 2$	$3(n - 2)$
3	1	3
4	2	6
5	3	9

If $3(n - 2) = 15$, what is n ?

- ☐ A. $n = 5$
☐ C. $n = 9$
☐ B. $n = 7$
☐ D. $n = 10$
- 7) A parallelogram is reflected over the x -axis. If one vertex moves from $(-4, 3)$ to $(-4, -3)$, which transformation property is demonstrated?
- ☐ A. The x -coordinate stays the same; the y -coordinate is negated
☐ B. The y -coordinate stays the same; the x -coordinate is negated
☐ C. Both coordinates are negated
☐ D. The distance from the origin is doubled
- 8) Maria has a loss of \$45 that she shares equally among 5 friends. How much does each friend owe?
- ☐ A. Each friend owes \$9
☐ B. Each friend receives \$9
☐ C. Each friend owes $-\$9$
☐ D. Cannot be divided
- 9) On a number line, if the point -12 is 12 units from zero, how many units from zero is the point 12?



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10) A debt of \$150 is split equally among 5 people. How much does each person owe?

☐ A. -\$750

☐ C. \$30

☐ B. -\$30

☐ D. \$750

Comparing Scientific Notation

Number 1:
 2.1×10^4
 $= 21,000$

Number 2:
 3.5×10^3
 $= 3,500$

11)

Which number is larger?

☐ A. Number 1

☐ C. They are equal

☐ B. Number 2

☐ D. Cannot determine

12) Which is equivalent to $(6v + 2) + (3v - 8)$?

☐ A. $9v - 6$

☐ C. $9v + 10$

☐ B. $3v - 6$

☐ D. $9v - 10$

$$3(2x + 5)$$



Expand and simplify

?

13)

What expression goes in the box marked ??

☐ A. $3 + 2x + 5$

☐ C. $5x + 8$

☐ B. $6x + 15$

☐ D. $2x + 5 + 3$



- 1) A container holds $\frac{3}{5}$ liter of juice. If you pour out $\frac{1}{4}$ of the juice, how much juice is left?
- ☐ A. $\frac{9}{20}$ liter ☐ C. $\frac{1}{2}$ liter
☐ B. $\frac{3}{20}$ liter ☐ D. $\frac{3}{5}$ liter
- 2) Which pair of numbers are closest in value?
- ☐ A. 2.5×10^{-2} and 2.6×10^{-2} ☐ C. 1.5×10^{-3} and 1.5×10^3
☐ B. 3.0×10^4 and 3.0×10^5 ☐ D. 9.9×10^2 and 1.1×10^3
- 3) A student claims that $x + x + x + 5 = 3x + 5$ and $x(3 + 5) = 3x + 5$. Which statement is true?
- ☐ A. Both claims are correct ☐ C. Only the second claim is correct
☐ B. Only the first claim is correct ☐ D. Neither claim is correct
- 4) A rental company charges \$25 per day for a kayak plus a \$15 equipment fee. The total bill is \$115. Which equation finds d , the number of days?
- ☐ A. $25d + 15 = 115$ ☐ C. $25(d + 15) = 115$
☐ B. $25 + 15d = 115$ ☐ D. $15d + 25 = 115$
- 5) A school wants to estimate the average amount of time students spend on homework per night. Which sample size is best?
- ☐ A. 10 students ☐ C. 100 students
☐ B. 25 students ☐ D. 1000 students



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- 6) A circle has radius 7 cm. Find its circumference using $\pi \approx \frac{22}{7}$.

- 7) Two sales reps' weekly commission earnings (in dollars):

Rep	Mean	Median
Rep A	\$1200	\$1400
Rep B	\$1200	\$1000

Which statement best describes their earnings?

- ☐ A. Both reps earn identical amounts weekly
☐ B. Rep A has low-earning weeks pulling the mean down; Rep B has high-earning weeks
☐ C. Rep A's median exceeds the mean (low outliers); Rep B's mean exceeds median (high outliers)
☐ D. Rep B earns more on average
- 8) A dot plot shows the number of hours 8 friends played video games last Saturday: 0, 1, 1, 2, 3, 3, 3, 5. Which statistic is MOST resistant to the outlier (5 hours)?
- ☐ A. Mean
☐ B. Median
☐ C. Range
☐ D. Mode
- 9) A circle has a radius of 7 cm. What is its area? (Use $\pi \approx 3.14$. Round to the nearest hundredth if needed.)



1) A librarian wants to know how many books each student checks out per month. She decides to survey students who are currently in the library. What type of bias does this create?

- ☐ A. Systematic bias
☐ B. Convenience bias

- ☐ C. Measurement bias
☐ D. Voluntary response bias

2) A model airplane has a scale of 1 in : 8 ft. The model is 12 inches long. How long is the actual airplane?

- ☐ A. 48 ft
☐ B. 64 ft

- ☐ C. 96 ft
☐ D. 108 ft

3) A survey uses a probability model with outcomes {Agree, Neutral, Disagree}. The model shows $P(\text{Agree}) = \frac{7}{20}$ and $P(\text{Disagree}) = \frac{1}{4}$. Find $P(\text{Neutral})$.

- ☐ A. $\frac{6}{20}$
☐ B. $\frac{8}{20}$

- ☐ C. $\frac{9}{20}$
☐ D. $\frac{12}{20}$

4) Raw data: 55, 52, 58, 51, 56, 53, 59. After creating a stem-and-leaf plot and ordering, what is the value at the second position?

- ☐ A. 51
☐ B. 52

- ☐ C. 53
☐ D. 55

5) Which pair correctly matches likelihood terms with their probabilities?

- ☐ A. Impossible = 0.5, Certain = 0.5
☐ B. Impossible = 0, Certain = 1

- ☐ C. Impossible = -1, Certain = 2
☐ D. Impossible = 1, Certain = 0



6) Which of the following is NOT equivalent to $-6 - 3$?

☐ A. $-6 + (-3)$

☐ C. -9

☐ B. $-(6 + 3)$

☐ D. $6 - (-3)$

7) A microfinance organization provides loans at 11% simple interest. If a borrower takes a \$3000 loan to start a business, how much will be owed after 2 years?

☐ A. \$3330

☐ C. \$3660

☐ B. \$3600

☐ D. \$4200

8) Simplify: $3xy + 5xy - 2xy$

☐ A. $6xy$

☐ C. $8xy$

☐ B. $10xy$

☐ D. 0

9) A school had 360 students. If $\frac{1}{3}$ of them attend the science club, what percent is that?



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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.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.RP.3) Lower end: $3 \times 2000 = \$6000$ for three months of expenses.
- 2) **Choice B is correct.** (7.NS.1-7.NS.3) Total volume = $\frac{3}{8} + \frac{5}{8} = \frac{8}{8} = 1$ liter.
- 3) **Choice B is correct.** (7.EE.1-7.EE.2) Any non-zero number raised to the power of zero equals 1: $5^0 = 1$.
- 4) **Choice D is correct.** (7.EE.4a) This uses the distributive property form $a(b - c)x$ to represent the cost per bundle times the number of bundles.
- 5) **The correct answer is 6.** (7.RP.3) Year 5: $2000(1.04)^5 = 2433.31$. Year 6: $2000(1.04)^6 = 2530.64 > 2500$.
- 6) **Choice B is correct.** (7.EE.3-7.EE.4) Divide by 3: $n - 2 = 5$. Add 2: $n = 7$.
- 7) **Choice A is correct.** (7.G.1-7.G.5) Reflection over the x -axis follows the rule $(x, y) \rightarrow (x, -y)$. The x -value -4 remains, and y changes from 3 to -3 .
- 8) **Choice A is correct.** (7.NS.1-7.NS.3) A loss of \$45 is represented as -45 . Dividing: $(-45) \div 5 = -9$ means each owes \$9 (or is owed \$ -9).
- 9) **The correct answer is 12.** (7.NS.1-7.NS.3) Both -12 and 12 are the same distance from zero, which is 12 units. They are opposites.
- 10) **Choice B is correct.** (7.NS.1-7.NS.3) Debt: $-150 \div 5 = -30$ dollars per person.
- 11) **Choice A is correct.** (7.NS.1-7.NS.3) $21,000 > 3,500$, so 2.1×10^4 is larger.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) Combine: $(6v + 3v) + (2 - 8) = 9v - 6$.
- 13) **Choice B is correct.** (7.EE.1-7.EE.2) Expanding $3(2x + 5)$ gives $3 \cdot 2x + 3 \cdot 5 = 6x + 15$.
- 14) **Choice D is correct.** (7.EE.4a) Option D matches $2x + 7 = 21$: multiply x by 2, add 7. Others do not use the form correctly.
- 15) **Choice A is correct.** (7.EE.3-7.EE.4) Add 7: $-2x = 8$. Divide by -2 : $x = -4$.
- 16) **Choice A is correct.** (7.SP.5-7.SP.8) $P(A) = \frac{1}{2} = 0.5$ is the largest probability. $B = 0.25$, $C = D = 0.125$.
- 17) **Choice C is correct.** (7.SP.3) City A clusters at 70–75 (range 5), indicating consistency. City B spans 50–90 (range 40), showing high variability. Both distributions include temperatures 70–75 degrees, so they overlap there.
- 18) **Choice D is correct.** (7.RP.3) Commission = commission rate $\times$ base price = $0.03 \times 22000 = \$660$. The documentation fee does not affect the commission base.
- 19) **Choice D is correct.** (7.SP.1-7.SP.4) All leaves appear exactly once, so no value repeats. There is no mode.
- 20) **Choice D is correct.** (7.RP.1-7.RP.3) Apples: $5 \times \$0.60 = \3.00 . Oranges: $3 \times \$1.20 = \3.60 . Total: $\$3.00 + \$3.60 = \$6.60$.
- 21) **The correct answer is B, C.** (7.NS.2) A: FALSE—three negatives give one negative. B: TRUE—two negatives cancel (positive); two positives remain positive. C: TRUE—always negative. D: FALSE— $(-5) \times (-2) \times (-1) = 10 \times (-1) = -10$, not 10.
- 22) **Choice A is correct.** (7.G.4-7.G.6) Rectangle: $30 \times 20 = 600 \text{ m}^2$. Triangle: $\frac{1}{2} \times 20 \times 5 = 50 \text{ m}^2$. Pond: $3.14 \times 9 = 28.26 \text{ m}^2$. Grass: $600 - 50 - 28.26 = 521.74 \text{ m}^2$.
- 23) **Choice C is correct.** (7.G.4-7.G.6) Base area = $\frac{1}{2} \times 4 \times 3 = 6 \text{ m}^2$. Volume = $6 \times 11 = 66 \text{ m}^3$.
- 24) **Choice C is correct.** (7.G.1-7.G.5) In an isosceles triangle, the two base angles are equal. If each is 20° , the vertex angle is $180 - 20 - 20 = 140^\circ$ (obtuse, as required).
- 25) **Choice B is correct.** (7.G.1-7.G.5) Two sides ($ST = 7 \text{ cm}$ and $TU = 6 \text{ cm}$) and the included angle (at $T = 52^\circ$) are known. This is the SAS (Side-Angle-Side) condition.
- 26) **Choice A is correct.** (7.G.4-7.G.6) The radius is half the diameter: $14 \div 2 = 7 \text{ cm}$.
- 27) **Choice C is correct.** (7.SP.1-7.SP.4) Ages 12–17: $\frac{85}{100} = 0.85$ or 85%. Ages 18–24: $\frac{102}{120} = 0.85$ or 85%. Ages 25+: $\frac{44}{100} = 0.44$ or 44%. Ages 25+ is lowest.
- 28) **Choice D is correct.** (7.RP.1-7.RP.3) Cost per pencil = $\frac{1/2}{8} = \frac{1}{2} \times \frac{1}{8} = \frac{1}{16} = 0.0625$ dollars.
- 29) **Choice D is correct.** (7.RP.1-7.RP.3) All y/x ratios equal 5 gallons per minute, confirming a proportional relationship.
- 30) **Choice D is correct.** (7.RP.1-7.RP.3) The rate is $\frac{25 \text{ beats}}{\frac{1}{5} \text{ mile}} = 25 \div \frac{1}{5} = 25 \times 5 = 125$ beats per mile.



Hi, Progress Maker!

◇ You have done more than complete a set of tests. You have rehearsed the habits that make Grade 7 math feel less surprising. ◇

★ **Remember this:** Progress is not always loud. Sometimes it looks like fewer careless errors, clearer work, better pacing, and more confidence when a problem is unfamiliar. You practiced across 8 full Grade 7 practice tests, and that repeated effort matters. ★

Signs of Growth

- **Clear Work:** Your steps are easier to follow.
- **Better Pacing:** You know when to move on and return.
- **Stronger Checks:** You catch mistakes earlier.
- **Calmer Thinking:** You know what to try next.

Grade 7 test-day tip: Keep one short list of mistakes you often make, then check that list before each practice session.

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

Jay Daie

Your Growth Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** full-length Math practice tests and **2** 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:

8 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
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 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!



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