

10 Missouri MAP

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



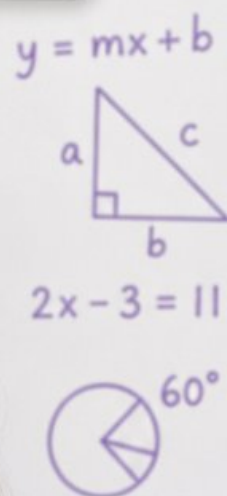
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



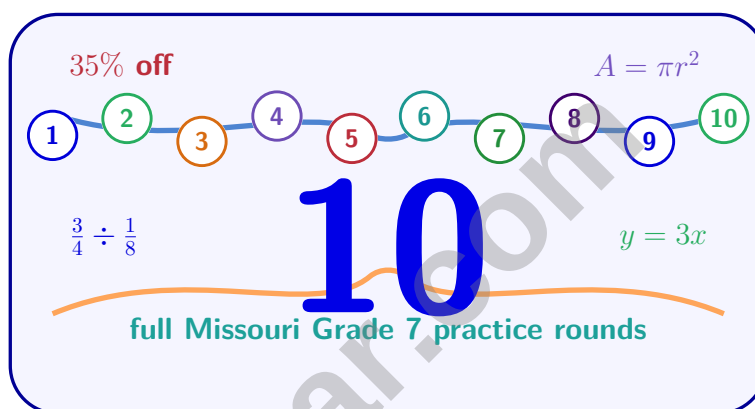
10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 Missouri MAP Grade 7 Math Practice Tests

Missouri Grade 7 MAP Practice for balanced Grade 7 review of proportional thinking, rational operations, equations, geometry, and data



Ten complete 40-question Grade 7 MAP 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, Missouri Grade 7 Problem Solver!

Ten focused rounds for sharper Missouri MAP math thinking

This book gives you ten full Grade 7 MAP 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 Missouri 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.

Missouri 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 Missouri MAP 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 Missouri 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.



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& answers

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1) 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

2) Simplify: $\frac{g^{14}}{g^6}$

☐ A. g^8

☐ B. g^{20}

☐ C. g^{84}

☐ D. g^2

3) A teacher buys 5 notebooks at $\$x$ each and spends a total of \$45 (including a \$5 coupon discount). What is the price per notebook?

☐ A. \$8

☐ B. \$9

☐ C. \$10

☐ D. \$12

4) A price p increases by 7%. Write the new price in factored form.

☐ A. $p + 0.07p = p(1 + 0.07) = 1.07p$

☐ B. $p - 0.07p$

☐ C. $0.07p$

☐ D. $p + 7$

5) Two dot plots show overlapping distributions of plant heights. A student concludes, "Population A is taller because some dots in A are higher than some dots in B." What is the error?

☐ A. The student ignored variability; a few high values don't indicate overall higher center

☐ B. Dot plots cannot show height comparisons

☐ C. Overlapping always means identical distributions

☐ D. The student is correct



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- 6) A school cafeteria offers lunch combinations with a choice of 2 sides (Salad or Veggies), 3 proteins (Chicken, Fish, Beef), and 2 breads (Roll or Cornbread). How many different lunches can be made?

☐ A. 7 ☐ C. 18
☐ B. 12 ☐ D. 36

- 7) Two box plots compare the price (in dollars) of gasoline over a year at two locations. Location 1: Min = \$2.10, Median = \$2.50, Max = \$2.90. Location 2: Min = \$2.00, Median = \$2.50, Max = \$3.20. A traveler wants stable prices. Which location has more volatile prices?

☐ A. Location 1 (smaller range: \$0.80) ☐ D. Location 1 (higher median means stability)
☐ B. Location 2 (larger range: \$1.20)
☐ C. Both have identical volatility

- 8) A tree diagram shows all outcomes for spinning a spinner with three colors and flipping a coin. How many total outcomes are displayed?

☐ A. 5 ☐ C. 8
☐ B. 6 ☐ D. 9

- 9) A six-sided die was rolled 120 times. The results are shown below.

Face	1	2	3	4	5	6
Frequency	18	22	19	21	25	15

What is the experimental probability of rolling a 5?

☐ A. $\frac{25}{120}$ ☐ C. $\frac{1}{6}$
☐ B. $\frac{7}{24}$ ☐ D. $\frac{15}{120}$



10) A probability of $\frac{1}{4}$ is what percent?

☐ A. 4%

☐ C. 25%

☐ B. 14%

☐ D. 75%

11) A student estimated her project would weigh 850 grams. The actual weight is 1000 grams. What is the percent error?

☐ A. 17.6%

☐ C. 20%

☐ B. 82.4%

☐ D. 15%

12) Expand and simplify: $5(2n - 3) - 4$

☐ A. $10n - 19$

☐ C. $10n - 7$

☐ B. $10n - 11$

☐ D. $7n - 3$

13) How would you verify that a simple interest problem is correct? Which step is essential?

☐ A. Use the formula $A = P(1 + rt)$ to check that the total amount is correct

☐ C. Compare the answer to other students' work

☐ B. Divide the interest by the principal to ensure the rate matches the given rate

☐ D. Plug the values back into the formula and recalculate

14) Evaluate the expression: $-15 - 6 + (-4)$. (Remember: subtraction and addition are performed left to right.)

☐ A. -25

☐ C. -5

☐ B. -13

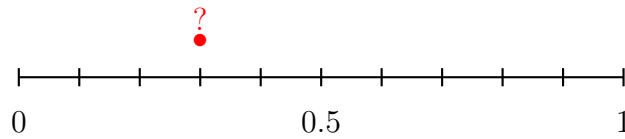
☐ D. 5



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- 1) A probability number line is shown below.



Which probability is marked on the number line?

- ☐ A. 0.1 ☐ C. 0.3
☐ B. 0.2 ☐ D. 0.4
- 2) A composite shape is made of two triangles sharing a common base. The base is 6 cm and each triangle has a height of 4 cm. What is the combined area?
- ☐ A. 12 cm² ☐ C. 36 cm²
☐ B. 24 cm² ☐ D. 48 cm²
- 3) A triangular prism has a right-triangular base with legs 8 m and 9 m, and the prism has a depth of 5 m. What is the volume?
- ☐ A. 90 m³ ☐ C. 180 m³
☐ B. 108 m³ ☐ D. 360 m³
- 4) Which of the following is the expanded form of $-4(2y - 3)$?
- ☐ A. $-8y - 12$ ☐ C. $8y + 12$
☐ B. $-8y + 12$ ☐ D. $8y - 3$



Like Terms Table

x terms	y terms
$3x, 5x, -2x$	$4y, y, -3y$

5)

Which expression is equivalent to the combined like terms shown in the table?

☐ A. $6x + 2y$

☐ C. $-10xy$

☐ B. $8x + 5y$

☐ D. $10x + 2y$

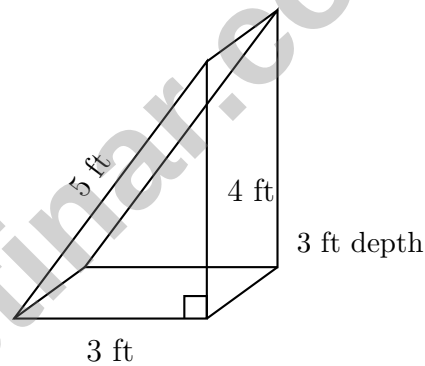
6) What is the correct factorization of $-6m + 18$?

☐ A. $6(-m + 3)$

☐ C. $-6(m + 3)$

☐ B. $-6(m - 3)$

☐ D. $6(m - 3)$



7)

A triangular prism has a right triangular base with legs 3 ft and 4 ft (hypotenuse 5 ft), and the prism has depth 3 ft. Find the surface area.

☐ A. 12 ft^2

☐ C. 48 ft^2

☐ B. 24 ft^2

☐ D. 72 ft^2



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1) Maria scored 85% on a test with 40 questions. How many questions did she answer correctly?

☐ A. 24

☐ C. 34

☐ B. 30

☐ D. 36

2) A circle graph shows how a family spends its monthly budget. Rent is 30%, food is 25%, utilities is 15%, and savings is 30%. Which categories tie for the largest sector?

☐ A. Food and Utilities

☐ C. Rent and Savings

☐ B. Utilities and Savings

☐ D. Food and Rent

3) A fair six-sided die is rolled 60 times. Based on the theoretical probability, how many times would you expect to roll a 5?

Standard: 83,500

Scientific: 8.35×10

4)

What is the missing exponent?

☐ A. 3

☐ C. 5

☐ B. 4

☐ D. 6



5) Which expression simplifies to $8z - 1$?

☐ A. $(5z + 3) + (3z - 4)$

☐ C. $(10z - 5) - (2z + 4)$

☐ B. $(6z + 2) - (2z - 3)$

☐ D. $(7z + 3) + (z + 4)$

6) Simplify: $(y^2)^6$

☐ A. y^8

☐ C. y^{36}

☐ B. y^{12}

☐ D. $2y^6$

7) A spinner has sectors with the following angle measures: 60° , 120° , and 180° . Find the probability of landing on the 120° sector as a fraction.



8) An online store charges \$9.99 per item plus a fixed shipping cost of \$5.99. If the total order is \$54.95, how many items were ordered? Which equation is correct?

☐ A. $5.99x + 9.99 = 54.95$

☐ C. $9.99x + 5.99 = 54.95$

☐ B. $9.99 + 5.99x = 54.95$

☐ D. $x(9.99 + 5.99) = 54.95$

9) Solve for x : $2(x - 7) = 2x - 14$

☐ A. $x = 0$ only

☐ C. All real numbers

☐ B. $x = 7$ only

☐ D. No solution



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Missouri MAP 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 Missouri MAP practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (7.NS.1-7.NS.3) Perimeter = $4s = 24$, so $s = 6$ meters. Area = $s^2 = 6^2 = 36 \text{ m}^2$.
- 2) **Choice A is correct.** (7.EE.1-7.EE.2) Quotient rule: subtract exponents with the same base: $\frac{g^{14}}{g^6} = g^{14-6} = g^8$.
- 3) **Choice C is correct.** (7.EE.4a) Equation: $5x - 5 = 45$. Add 5: $5x = 50$. Divide by 5: $x = 10$.
- 4) **Choice A is correct.** (7.EE.1-7.EE.2) A 7% increase is $p + 0.07p = p(1 + 0.07) = 1.07p$. Factoring shows the scale factor.
- 5) **Choice A is correct.** (7.SP.1-7.SP.4) Overlapping distributions are common. Comparing populations requires comparing centers (mean/median), not cherry-picking individual values. The student committed selection bias by choosing high outliers.
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) By the counting principle: $2 \times 3 \times 2 = 12$ different lunch combinations.
- 7) **Choice B is correct.** (7.SP.3) Volatility is measured by range. Location 1: $\$2.90 - \$2.10 = \$0.80$. Location 2: $\$3.20 - \$2.00 = \$1.20$. Larger range indicates more volatility.
- 8) **Choice B is correct.** (7.SP.5-7.SP.8) Spinner: 3 colors; Coin: 2 outcomes. Total: $3 \times 2 = 6$ branches at the end of the tree.
- 9) **Choice A is correct.** (7.SP.6) The face 5 appeared 25 times out of 120 total rolls. Experimental probability = $\frac{25}{120}$. Note: this is slightly higher than the theoretical probability of $\frac{1}{6}$.
- 10) **Choice C is correct.** (7.SP.5-7.SP.8) $\frac{1}{4} = 0.25 = 25\%$.
- 11) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|850-1000|}{1000} \times 100\% = \frac{150}{1000} \times 100\% = 15\%$.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) Expand: $5(2n) - 5(3) - 4 = 10n - 15 - 4 = 10n - 19$.
- 13) **Choice D is correct.** (7.RP.3) To verify a simple interest calculation, substitute all values back into $I = Prt$ (or $A = P + I$) to check that the result is correct. This is a standard verification method in math.
- 14) **Choice A is correct.** (7.NS.1-7.NS.3) Working left to right: $-15 - 6 = -21$, then $-21 + (-4) = -25$.
- 15) **Choice D is correct.** (7.RP.1-7.RP.3) Model length in meters: $200 \div 200 = 1 \text{ meter} = 100 \text{ cm}$.
- 16) **Choice D is correct.** (7.RP.3) Working backward: $107.10 \div 1.07 = \$100$ before tax. So discounted price was \$100, making discount = $120 - 100 = \$20$.
- 17) **The correct answer is 16 m.** (7.G.4-7.G.6) $C = \pi d \Rightarrow 50.24 = 3.14d \Rightarrow d = 50.24 \div 3.14 = 16 \text{ m}$.
- 18) **Choice A is correct.** (7.NS.1b) When adding two negative numbers, add their absolute values and keep the negative sign: $|-6| + |-4| = 10$, so $-6 + (-4) = -10$.
- 19) **Choice C is correct.** (7.EE.1) Combine: $\frac{1}{2}a + \frac{1}{4}a = \frac{2}{4}a + \frac{1}{4}a = \frac{3}{4}a$.
- 20) **Choice A is correct.** (7.EE.1-7.EE.2) Both terms share the common factor 2. Factor it out: $2 \cdot 5 + 2 \cdot 3 = 2(5 + 3)$.
- 21) **Choice C is correct.** (7.SP.1-7.SP.4) 37.5% of 800 = $0.375 \times 800 = 300$ students.
- 22) **The correct answer is A,D.** (7.EE.4b) Solve: add 1 to get $2x \geq 8$, divide by 2 to get $x \geq 4$ (A is correct). B says ≥ 4 but writes "greater than", which excludes equality (incorrect). C says $x > 4$ (incorrect). D: filled circle at 4 with arrow right is correct ($\geq$ notation). Correct answers: A and D.
- 23) **The correct answer is 343.** (7.G.4-7.G.6) $V = s^3 = 7^3 = 343 \text{ ft}^3$.
- 24) **Choice C is correct.** (7.RP.3) If $12 = 0.15 \times n$, then $n = \frac{12}{0.15} = 80$.
- 25) **The correct answer is 157.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times (2.5)^2 \times 8 = 3.14 \times 6.25 \times 8 = 157 \text{ m}^3$.
- 26) **Choice D is correct.** (7.EE.1-7.EE.2) The work is correct: $5 - 3(2) = 5 - 6 = -1$.
- 27) **Choice D is correct.** (7.RP.1-7.RP.3) Unit price = $\$91 \div 7 = \13 per item.
- 28) **Choice C is correct.** (7.RP.3) Investments = $8\% \times \$60,000 = 0.08 \times 60000 = \$4,800$.
- 29) **Choice C is correct.** (7.NS.1-7.NS.3) Subtracting a negative is adding the opposite: $-4 - (-6) = -4 + 6 = 2$.
- 30) **Choice A is correct.** (7.NS.1-7.NS.3) (A) $\text{Neg} \div \text{neg} = \text{pos}$: $(-18) \div (-9) = 2$. (B) $\text{Neg} \div \text{pos} = \text{neg}$. (C) $\text{Pos} \div \text{neg} = \text{neg}$. (D) $\text{Neg} \div \text{pos} = \text{neg}$.



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!



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FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED