

3

Missouri MAP

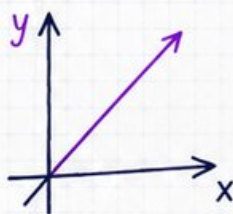
GRADE

7

MATH

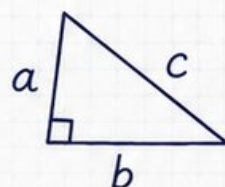
PRACTICE TESTS

- ✓ Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$$



$$3(x - 2) = 2x + 5$$



3 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
Math Skills



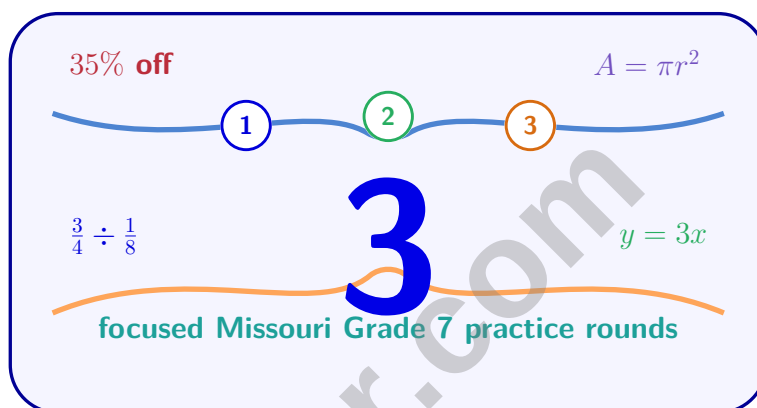
Detailed Answers
& Explanations



Improve Test
Performance

3 Missouri MAP Grade 7 Math Practice Tests

Three Focused MAP Tests with Review and Answer Support



Three 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!

Three focused rounds for sharper MAP math thinking

This book gives you three 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 three-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?

Three MAP tests, 120 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Test 3	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
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.

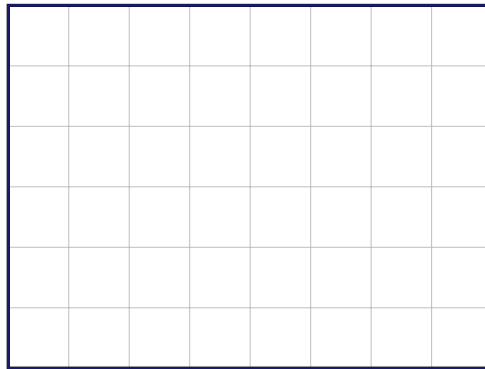


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& answers

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	28
★ Practice Test 3	_____	43
Practice Test Answer Keys	_____	58
Practice Test Answers and Explanations	_____	61

Each square = 2.5 meters



Parking Lot Layout

1)

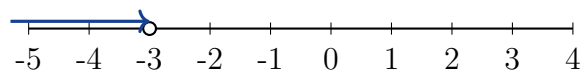
If the lot is 8 squares by 6 squares and each square is 2.5 meters per side, what is the actual area?

- ☐ A. 48 square meters ☐ C. 1800 square meters
☐ B. 3600 square meters ☐ D. 300 square meters

2) A recipe calls for 2.5 cups of milk. A cook estimated 2.2 cups. What is the percent error?

- ☐ A. 14% ☐ C. 10.5%
☐ B. 3% ☐ D. 12%

3) Which inequality is shown on this number line?



- ☐ A. $x \geq -3$ ☐ C. $x < -3$
☐ B. $x > -3$ ☐ D. $x \leq -3$



4) Expand: $7(2p + 3)$

☐ A. $14p + 3$

☐ B. $14p + 10$

☐ C. $14p + 21$

☐ D. $9p + 10$

5) Maya deposits \$1200 into a savings account with a simple interest rate of 4% per year. How much interest will she earn after 2 years?

☐ A. \$48

☐ B. \$240

☐ C. \$144

☐ D. \$96

6) Which statement best explains why simulation results often differ from theoretical probabilities?

☐ A. The simulation tool is always imperfect

☐ B. Random variation causes small differences in finite samples

☐ C. Theoretical probability is always wrong

☐ D. More simulations guarantee exact agreement with theory

7) The difference between two integers is -9 . If one integer is 4, what is the other integer? (Hint: difference means subtract.)

8) A recipe calls for 2 cups of flour. If you make 150% of the recipe, how much flour do you need?

☐ A. 2.5 cups

☐ B. 4 cups

☐ C. 3.5 cups

☐ D. 3 cups



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9) A hat is priced at \$28. After a $\frac{1}{4}$ discount, what is the sale price?

☐ A. \$35

☐ C. \$7

☐ B. \$14

☐ D. \$21

10) A recipe uses $\frac{3}{4}$ cup flour for $\frac{1}{2}$ dozen cookies. How much flour is needed for 3 dozen cookies?

11) The equation $y = 5x$ represents a proportional relationship. Find the value of y when $x = 8$.

12) What is $12 + (-5)$?

☐ A. 7

☐ C. 17

☐ B. -7

☐ D. -17

13) Simplify: $4p + 6q + 2p - q$

☐ A. $6p + 5q$

☐ C. $4p + 6q$

☐ B. $6p + 7q$

☐ D. $12pq$



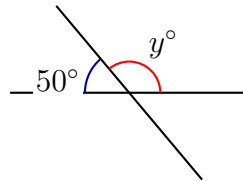
- 1) A cone with height 15 cm and base radius 6 cm is cut horizontally at a height of 5 cm from the apex. What is the radius of the circular cross-section?

☐ A. 2 cm

☐ C. 5 cm

☐ B. 4 cm

☐ D. 6 cm



2)

Two straight lines intersect. One angle formed is 50° . What is the measure of the angle marked y ?

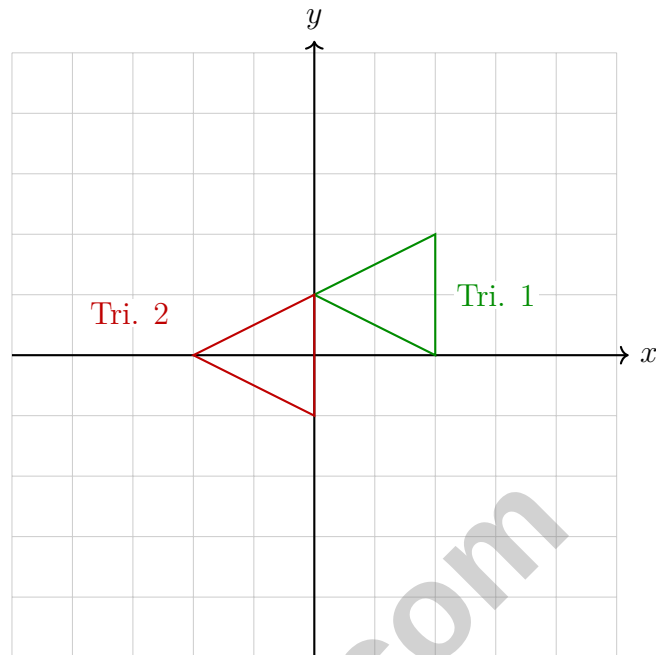
☐ A. 130°

☐ C. 50°

☐ B. 90°

☐ D. 140°





3)

Triangle 1 (green) is transformed to Triangle 2 (red). What single transformation maps Triangle 1 to Triangle 2?

- ☐ A. Translation only
- ☐ B. Rotation of 180° about the origin
- ☐ C. Reflection over the y -axis
- ☐ D. Reflection over the x -axis followed by a translation
- 4) Two similar triangles have perimeters of 20 inches and 50 inches. If the smaller triangle has one side of 4 inches, what is the length of the corresponding side in the larger triangle?
- ☐ A. 8 inches
- ☐ B. 10 inches
- ☐ C. 12.5 inches
- ☐ D. 20 inches



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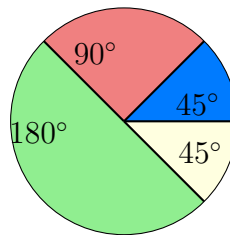
1) What is $\frac{3}{4} \div \frac{1}{2}$?

☐ A. $\frac{3}{8}$

☐ B. $\frac{2}{3}$

☐ C. $\frac{3}{2}$

☐ D. $\frac{1}{2}$



2)

This spinner shows four sectors with angle measures 45°, 90°, 180°, 45°. Which outcome is most likely?

☐ A. The 45° sector

☐ C. The 180° sector

☐ B. The 90° sector

☐ D. All outcomes are equally likely

3) A travel agent books a vacation package costing \$2,000 and earns a 5% commission. The client also adds travel insurance for \$150. What is the agent's commission on just the package?

☐ A. \$160

☐ C. \$150

☐ B. \$110

☐ D. \$100

4) A principal of P dollars earns 8% annual compound interest. After 4 years, the balance is approximately \$2,720.98. Solve for P .

☐ A. \$1,500

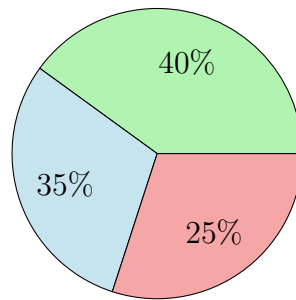
☐ C. \$2,000

☐ B. \$1,800

☐ D. \$2,500



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5) Rent Food Transportation

A budget pie chart shows 40% rent, 35% food, 25% transportation out of \$2 400 monthly income. If you want to reduce transportation spending from 25% to 20%, by how much (in dollars) will your transportation budget decrease?

☐ A. \$120

☐ C. \$360

☐ B. \$240

☐ D. \$480

6) A gardener increased the area of a flowerbed from 40 square feet to 56 square feet. What is the percent increase?

☐ A. 16%

☐ C. 40%

☐ B. 28.6%

☐ D. 60%

7) A die is rolled to simulate an event with probability $\frac{1}{3}$. Which outcomes on the die could represent a success?

☐ A. Rolling a 1 or 2

☐ C. Rolling a 1, 2, 3, or 4

☐ B. Rolling a 1 or 2 or 3

☐ D. Rolling a 1, 2, 3, 4, or 5



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 D is correct.** (7.RP.1-7.RP.3) Actual dimensions: $8 \times 2.5 = 20$ m; $6 \times 2.5 = 15$ m. Area = $20 \times 15 = 300$ m².
- 2) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|2.2-2.5|}{2.5} \times 100\% = \frac{0.3}{2.5} \times 100\% = 12\%$.
- 3) **Choice C is correct.** (7.EE.4b) An open circle at -3 with a left-pointing arrow indicates $x < -3$.
- 4) **Choice C is correct.** (7.EE.1-7.EE.2) Distribute 7: $7(2p) + 7(3) = 14p + 21$.
- 5) **Choice D is correct.** (7.RP.3) STEP 1: Convert percentage to decimal: $4\% = 4 \div 100 = 0.04$. STEP 2: $I = 1200 \times 0.04 \times 2 = \96 .
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) Finite samples exhibit natural variation. As the number of trials increases, simulation results converge toward theoretical probability (Law of Large Numbers).
- 7) **The correct answer is 13.** (7.NS.1-7.NS.3) If the difference is $4 - x = -9$, then $x = 4 - (-9) = 4 + 9 = 13$. Check: $4 - 13 = -9$ ✓.
- 8) **Choice D is correct.** (7.RP.3) 150% of 2 is $1.50 \times 2 = 3$ cups.
- 9) **Choice D is correct.** (7.RP.3) Discount = $\frac{1}{4} \times 28 = \7 . Sale price = $28 - 7 = \$21$.
- 10) **The correct answer is $\frac{9}{2}$.** (7.RP.1-7.RP.3) 3 dozen is 6 times $\frac{1}{2}$ dozen, so flour is $\frac{3}{4} \times 6 = \frac{18}{4} = \frac{9}{2} = 4\frac{1}{2}$ cups.
- 11) **The correct answer is 40.** (7.RP.1-7.RP.3) Substitute: $y = 5(8) = 40$.
- 12) **Choice A is correct.** (7.NS.1b) Subtract the smaller absolute value from the larger: $|12| - |-5| = 12 - 5 = 7$. The larger absolute value is positive, so the answer is 7.
- 13) **Choice A is correct.** (7.EE.1) Combine like terms: $(4p + 2p) + (6q - q) = 6p + 5q$.
- 14) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of $25cd$ and $35c$ is $5c$. Factor: $25cd - 35c = 5c(5d - 7)$.
- 15) **Choice C is correct.** (7.EE.4b) $x \leq 2$ includes 2 (filled circle) and all values less than 2 (arrow left).
- 16) **Choice C is correct.** (7.G.4-7.G.6) Surface area of the box: $SA = 2(12 \cdot 8 + 12 \cdot 5 + 8 \cdot 5) = 2(96 + 60 + 40) = 2(196) = 392$ in². This is the minimum paper needed.
- 17) **Choice D is correct.** (7.RP.1-7.RP.3) The unit rate is the y -value when $x = 1$. Because $(2, 30)$ is on the line through the origin, $k = 30/2 = 15$, so earning rate is \$15 per hour.
- 18) **The correct answer is A, C.** (7.SP.1-7.SP.4) City A dark roast (42%) > City B dark roast (38%), so A is correct. City B light roast (40%) > City A light roast (35%), so C is correct. B is wrong (survey size not given). D is wrong (A: 23%, B: 22%).
- 19) **Choice D is correct.** (7.RP.3) Using the proportion $\frac{40}{100} = \frac{d}{1}$ where d is the decimal, divide: $\frac{40}{100} = 0.4$.
- 20) **Choice C is correct.** (7.RP.3) Final price = $\$80 - (15\% \times \$80) = \$80 - \$12 = \$68$.
- 21) **Choice B is correct.** (7.NS.2d) $9 \div 10 = 0.9$. Powers of 10 produce terminating decimals with the numerator shifted by decimal places.
- 22) **Choice B is correct.** (7.NS.1-7.NS.3) Moving the decimal 4 places right: $0.000789 \rightarrow 7.89$. Correct answer is 7.89×10^{-4} , not -3 .
- 23) **Choice A is correct.** (7.EE.1-7.EE.2) Substitute: $\frac{9}{3} + 2(-2) = 3 - 4 = -1$.
- 24) **Choice A is correct.** (7.EE.1-7.EE.2) First simplify inside parentheses: $\frac{x^4}{x^2} = x^{4-2} = x^2$. Then apply power rule: $(x^2)^3 = x^{2 \times 3} = x^6$.
- 25) **Choice B is correct.** (7.EE.3-7.EE.4) Divide by 3: $2x + 1 = 9$. Subtract 1: $2x = 8$. Divide by 2: $x = 4$.
- 26) **Choice A is correct.** (7.SP.1-7.SP.4) Surveying at a soccer game is convenient but only includes parents present at that event. It misses families without children in soccer and those who attend other activities.
- 27) **Choice B is correct.** (7.SP.1-7.SP.4) Same median (78) but Exam 2's smaller range (8 vs. 25) indicates students' scores were clustered more tightly, showing more consistent performance.
- 28) **Choice D is correct.** (7.RP.1-7.RP.3) The constant is $k = \frac{y}{x} = \frac{8}{2} = 4$.
- 29) **Choice B is correct.** (7.NS.1-7.NS.3) Start at 0. Descend (go down) 3.5 m: $0 - 3.5 = -3.5$ m. Ascend (go up) 1.2 m: $-3.5 + 1.2 = -2.3$ m.



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Hi, Brave Learner!

◇ No one gets stronger by only doing easy problems. The questions that slowed you down were part of the training. This short, concentrated book gave you three focused Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Mistakes are not proof that you cannot do math. They are directions. They show what to review, what to ask about, and what to practice next. ★

How to Use Mistakes

- **Name It:** Was it reading, setup, arithmetic, or checking?
- **Fix It:** Correct the work while the question is fresh.
- **Repeat It:** Try one similar problem soon.
- **Remember It:** Write the lesson in your own words.

Grade 7 test-day tip: Treat every corrected error as a point you are preparing to earn next time.

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

Jay Daie

Your Brave-Learning Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **3** full-length Math practice tests and **2** online tests to help Grade 7 students build confidence, strengthen skills, and excel on standardized assessments.

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- ✓ The Number System
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