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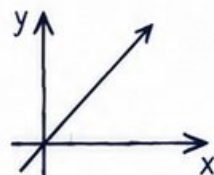
Missouri MAP

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs

$$y = mx + b$$



$$\frac{2x}{3} + \frac{x}{6} = 2$$



$$V = \frac{1}{3} \pi r^2 h$$

**4 PRINTED TESTS****2 ONLINE TESTS**

USE THESE TWO
**ADDITIONAL ONLINE
PRACTICE TESTS**

FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



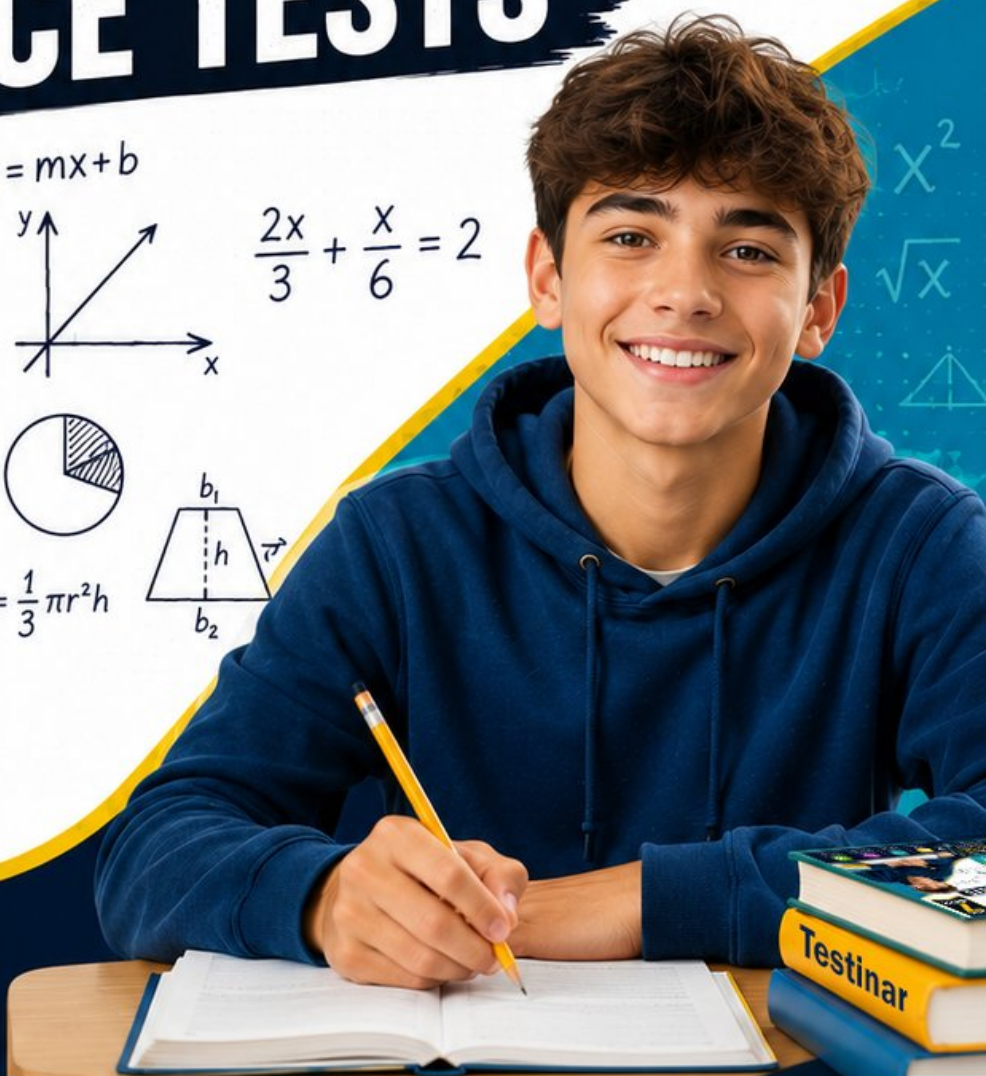
Strengthen
Math Skills



Detailed Answers
& Explanations



Improve Test
Performance



4 Missouri MAP Grade 7 Math Practice Tests

MAP Practice Built for Review, Accuracy, and Growth



Four 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!

Four focused rounds for sharper MAP math thinking

This book gives you four 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 four-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?

Four MAP tests, 160 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.
Tests 3–4	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

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- 1) A rectangular prism has a base area of 24 square inches and a height of 6 inches. Find the volume.

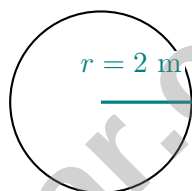
☐ A. 288 in^3

☐ C. 72 in^3

☐ B. 144 in^3

☐ D. 30 in^3

- 2) A temperature changes from -8 degrees to 8 degrees. What is the total change in temperature?



3)

What is the area of this circle? Use $\pi \approx 3.14$.

☐ A. 6.28 m^2

☐ C. 25.12 m^2

☐ B. 12.56 m^2

☐ D. 50.24 m^2

- 4) A cylindrical water bottle has a volume of 785 cm^3 and a diameter of 10 cm . What is the height? Use $\pi \approx 3.14$.

☐ A. 5 cm

☐ C. 12.5 cm

☐ B. 10 cm

☐ D. 15 cm



- 5) A scatter plot shows the relationship between hours studied (x-axis) and test score (y-axis) for 15 students. The points show a clear upward trend from (1, 60) to (5, 95). What does this scatter plot suggest?
- ☐ A. Studying more hours guarantees a higher score
- ☐ B. There is a positive association between study time and test scores
- ☐ C. All students who study 5 hours will score 95
- ☐ D. Study time has no effect on test performance
- 6) A fair six-sided die is rolled once. What is the probability of rolling a number greater than 4?
- ☐ A. $\frac{1}{6}$
- ☐ B. $\frac{1}{3}$
- ☐ C. $\frac{1}{2}$
- ☐ D. $\frac{2}{3}$
- 7) A spinner with sections 1, 2, 3, 4, 5 is spun, and a coin is flipped. How many outcomes have an odd number and Heads?
- ☐ A. 2
- ☐ B. 3
- ☐ C. 5
- ☐ D. 10
- 8) A stem-and-leaf plot shows the ages of workers at two companies. Company X has data: 22, 24, 25, 26, 29; Company Y has data: 18, 19, 22, 45, 48. Which statement is best supported?
- ☐ A. Company X has a higher median and less spread
- ☐ B. Company Y has younger workers overall
- ☐ C. Both companies have the same age distribution
- ☐ D. Company X workers are older than Company Y workers



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- 9) A teacher randomly selects two students without replacement from a class of 12 to give a presentation. If 7 students are prepared, what is the probability both selected are prepared?
- ☐ A. $\frac{49}{144}$ ☐ C. $\frac{42}{120}$
☐ B. $\frac{7}{12} \cdot \frac{6}{12}$ ☐ D. $\frac{7}{22}$
- 10) A student rolled a number cube and recorded the results in a bar graph. Out of 240 rolls, the number 6 appeared in 38 rolls. What is the experimental probability of rolling a 6?
- ☐ A. $\frac{1}{6}$ ☐ C. 0.19
☐ B. $\frac{38}{240}$ ☐ D. 0.60
- 11) In a stem-and-leaf plot, the stem represents the tens digit and leaves represent the ones digit. If a value is 67, what stem and leaf should be written?
- ☐ A. Stem 6, Leaf 7 ☐ C. Stem 60, Leaf 7
☐ B. Stem 7, Leaf 6 ☐ D. Stem 67, Leaf 1
- 12) An irregular hexagon can be split into three rectangles: $(4 \text{ m} \times 2 \text{ m})$, $(3 \text{ m} \times 2 \text{ m})$, and $(2 \text{ m} \times 2 \text{ m})$. What is the total area?
- ☐ A. 18 m^2 ☐ C. 22 m^2
☐ B. 20 m^2 ☐ D. 24 m^2
- 13) Which is the best approximation for π ?
- ☐ A. $\frac{22}{7}$ ☐ C. 2.5
☐ B. 3 ☐ D. 4



- 1) A percent can be converted to an angle in a circle graph. What angle corresponds to 25% of a circle?

☐ A. 45° ☐ C. 90° ☐ B. 60° ☐ D. 120°

- 2) A hiker starts at an elevation of 500 feet and descends 750 feet. What is the hiker's final elevation? (Represent descent as a negative change.)



- 3) What is the side length of a square with area 121 square feet?

☐ A. 10 feet☐ C. 12 feet☐ B. 11 feet☐ D. 13 feet

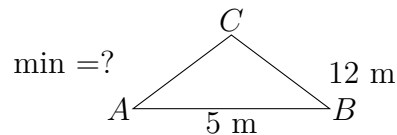
- 4) What is 3×0.5 ?

☐ A. 0.5☐ C. 3.5☐ B. 1.5☐ D. 6

- 5) A store receipt shows: 5 apples at \$0.60 per apple, and 3 oranges at \$1.20 per orange. What is the total cost?

☐ A. \$5.40☐ C. \$6.00☐ B. \$5.80☐ D. \$6.60

6)



What is the minimum possible length (in whole meters) for the third side of a triangle with sides 5 m and 12 m?

☐ A. 6 m☐ C. 8 m☐ B. 7 m☐ D. 9 m

7) If a number is positive, its opposite is:

☐ A. Negative☐ C. Zero☐ B. Positive☐ D. The same magnitude doubled

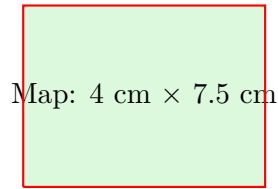
8) Evaluate: $\frac{5}{12} + \frac{1}{3}$. Express your answer as a fraction in simplest form.

9) A spinner is spun twice, and the compound event is “the first spin is different from the second spin.” If the spinner has 3 equal sections, how many successful outcomes are there?

☐ A. 3☐ C. 9☐ B. 6☐ D. 12

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- 1) A rectangular park on a map measures 4 cm by 7.5 cm. If the scale is 1 cm = 20 m, what is the actual perimeter of the park?



Scale: 1 cm = 20 m

- ☐ A. 260 m ☐ C. 520 m
☐ B. 360 m ☐ D. 460 m
- 2) A dot plot shows customer wait times (in minutes) at two restaurants. Restaurant X: 3, 4, 4, 5, 5, 5, 6, 6, 7 (minutes); Restaurant Y: 2, 5, 8, 10, 12, 15 (minutes). Which restaurant has more predictable wait times?
- ☐ A. Restaurant X (clustered around 5 minutes) ☐ C. Both restaurants have equally predictable times
☐ B. Restaurant Y (varies from 2 to 15 minutes) ☐ D. Restaurant Y is always faster
- 3) A composite figure is formed by joining a trapezoid (parallel sides 5 cm and 7 cm, height 4 cm) with a rectangle (7 cm $\times$ 3 cm). What is the total area?
- ☐ A. 24 cm² ☐ C. 48 cm²
☐ B. 45 cm² ☐ D. 60 cm²
- 4) A rectangular prism has length 12 cm, width 5 cm, and height 3 cm. Which expression correctly represents the volume?
- ☐ A. $(12 + 5) \times 3$ ☐ C. $2(12 + 5 + 3)$
☐ B. $12 \times 5 \times 3$ ☐ D. $12 + 5 + 3$



5) An arc is a portion of:

- ☐ A. The radius ☐ C. The circumference
☐ B. The diameter ☐ D. The sector

6) Which of the following is the correct criterion for constructing a right triangle when the hypotenuse and one leg are given?

- ☐ A. SSS ☐ C. SAS
☐ B. RHS (Right angle–Hypotenuse–Side) ☐ D. ASA

7) To simulate drawing two marbles from a bag with replacement, which approach correctly models the compound event?

- ☐ A. Flip a coin twice ☐ D. Spin a spinner twice, returning to all sectors both times
☐ B. Roll a die once
☐ C. Spin a spinner once and remove a sector for the second spin

8) Simplify: $0.5x + 1.5x + 2y - y$

- ☐ A. $3.5xy$ ☐ C. $1.5x + y$
☐ B. $2x + y$ ☐ D. $3.5x + 2y$

9) Factor: $12p - 8$

- ☐ A. $4(3p - 2)$ ☐ C. $8(4p - 1)$
☐ B. $2(6p - 4)$ ☐ D. $6(2p - 1.33)$



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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.G.4-7.G.6) $V = B \times h = 24 \times 6 = 144 \text{ in}^3$.
- 2) **The correct answer is 16.** (7.NS.1-7.NS.3) The change is final minus initial: $8 - (-8) = 8 + 8 = 16$ degrees.
- 3) **Choice B is correct.** (7.G.4-7.G.6) $A = \pi r^2 = 3.14 \times 2^2 = 3.14 \times 4 = 12.56 \text{ m}^2$.
- 4) **Choice B is correct.** (7.G.4-7.G.6) Radius is half the diameter: $r = 5 \text{ cm}$. $V = \pi r^2 h \Rightarrow 785 = 3.14 \times 25 \times h \Rightarrow 785 = 78.5h \Rightarrow h = 10 \text{ cm}$.
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) A positive trend means variables tend to increase together, but it does not guarantee outcomes or mean all data points fall exactly on a line.
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) Favorable outcomes: 5, 6 (two outcomes). Total outcomes: 6. $P(>4) = \frac{2}{6} = \frac{1}{3}$.
- 7) **Choice B is correct.** (7.SP.5-7.SP.8) Odd numbers: $\{1, 3, 5\} = 3$ outcomes. Heads: 1 outcome. Favorable: 1H, 3H, 5H = 3 outcomes.
- 8) **Choice A is correct.** (7.SP.3) Company X's median is 25, and Company Y's median is 22. Company X's range is 7 (29–22), while Company Y's range is 30 (48–18), showing less spread in Company X.
- 9) **Choice D is correct.** (7.SP.5-7.SP.8) $P(\text{first prepared}) = \frac{7}{12}$; 6 prepared remain out of 11 total. $P(\text{second prepared}) = \frac{6}{11}$. Product: $\frac{7}{12} \cdot \frac{6}{11} = \frac{42}{132} = \frac{7}{22}$.
- 10) **Choice B is correct.** (7.SP.6) Experimental probability = $\frac{\text{observed favorable outcomes}}{\text{total trials}} = \frac{38}{240} \approx 0.158$. This is the relative frequency from the observed data.
- 11) **Choice A is correct.** (7.SP.1-7.SP.4) The tens digit (6) is the stem; the ones digit (7) is the leaf.
- 12) **Choice A is correct.** (7.G.4-7.G.6) Rectangle 1: $4 \times 2 = 8 \text{ m}^2$. Rectangle 2: $3 \times 2 = 6 \text{ m}^2$. Rectangle 3: $2 \times 2 = 4 \text{ m}^2$. Total: $8 + 6 + 4 = 18 \text{ m}^2$.
- 13) **Choice A is correct.** (7.G.4-7.G.6) $\pi \approx 3.14159 \dots$. The common approximations are 3.14 and $\frac{22}{7} \approx 3.142857$.
- 14) **Choice A is correct.** (7.G.1-7.G.5) An equilateral triangle has all sides and all angles equal. Since the angle sum is 180° and all three angles are equal, each angle is $180^\circ \div 3 = 60^\circ$.
- 15) **Choice B is correct.** (7.SP.5-7.SP.8) Experimental probability = $\frac{\text{times event occurred}}{\text{total trials}} = \frac{10}{60}$.
- 16) **Choice B is correct.** (7.SP.1-7.SP.4) The differences between 38%, 40%, and 42% demonstrate normal sampling variability. Even though all three are random samples from the same population, each will produce slightly different estimates due to random chance. The true population proportion is likely near these values (around 40%), but exact values vary.
- 17) **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.
- 18) **The correct answer is A,D.** (7.RP.1-7.RP.3) A and D are unit rates because each gives a price per single unit of weight. Option B is a distance, and option C is a total count.
- 19) **Choice C is correct.** (7.RP.3) $\frac{15}{50} = \frac{3}{10} = 0.30 = 30\%$.
- 20) **Choice D is correct.** (7.RP.3) Discount = $\frac{1}{3} \times 150 = \50 . Final price = $150 - 50 = \$100$.
- 21) **Choice A is correct.** (7.SP.1-7.SP.4) Red (Italian) is 30% of 400 = $0.30 \times 400 = 120$ customers.
- 22) **Choice D is correct.** (7.RP.1-7.RP.3) The ratio is $y/x = 2/6 = 1/3$. For a fourth point: $y = \frac{x}{3}$. Check: (15, 5) gives $5 = \frac{15}{3}$ (correct).
- 23) **Choice D is correct.** (7.RP.1-7.RP.3) The unit rate is read from the point (1, 0.3), which is 0.3. The equation is $y = 0.3x$. When $x = 10$, $y = 0.3 \times 10 = 3$, not 5. The line passes through the origin.
- 24) **Choice D is correct.** (7.RP.3) Using the proportion $\frac{5}{8} = \frac{p}{100}$, solve to get $p = 62.5$. Thus $\frac{5}{8} = 0.625 = 62.5\%$.
- 25) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\frac{4/5}{2/5} = \frac{4}{5} \times \frac{5}{2} = \frac{20}{10} = 2$ documents per minute.
- 26) **Choice D is correct.** (7.RP.1-7.RP.3) Rate is $\frac{960}{8} = 120$ pages per minute. So $p = 120m$.
- 27) **The correct answer is -12.** (7.NS.2) $-9 \times \frac{4}{3} = \frac{-36}{3} = -12$.
- 28) **The correct answer is 100.** (7.NS.1-7.NS.3) Perimeter = $4s = 40$, so $s = 10 \text{ cm}$. Area = $s^2 = 10^2 = 100 \text{ cm}^2$.



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You Are Building Test Stamina

Hi, Stamina Builder!

◇ This carefully paced book gave you four steady Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Completing practice tests builds more than math knowledge. It builds the focus needed to think clearly for a long stretch. ◇

★ **Remember this:** That stamina matters. On real test day, calm pacing can be just as important as remembering a formula. ★

Stamina Skills

- **Breathe:** Reset before a difficult page.
- **Pace:** Do not spend too long in one place.
- **Return:** Come back to skipped questions with fresh eyes.
- **Finish Strong:** Use the last minutes to check.

Grade 7 test-day tip: Practice a simple reset: pause, breathe, reread, then choose your next step.

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

Jay Daie

Your Test-Stamina Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **4** 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:

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2 Online Practice Tests

 Detailed Answers & 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



Build Confidence

Practice regularly to feel prepared and test-ready.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



Improve Understanding

Learn with clear explanations and step-by-step solutions.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Boost Performance

Apply your knowledge and achieve your best score!

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!

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