

6

MISSOURI
MAP

GRADE

7

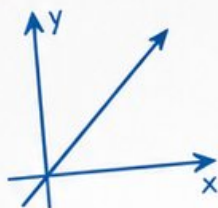
MATH

PRACTICE TESTS



Standards Aligned
Problem Solving For
Comprehensive
Assessment Programs

$$y = mx + b$$



$$2(x - 3) = 4x + 6$$

6 PRINTED
TESTS2 ONLINE
TESTS

USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



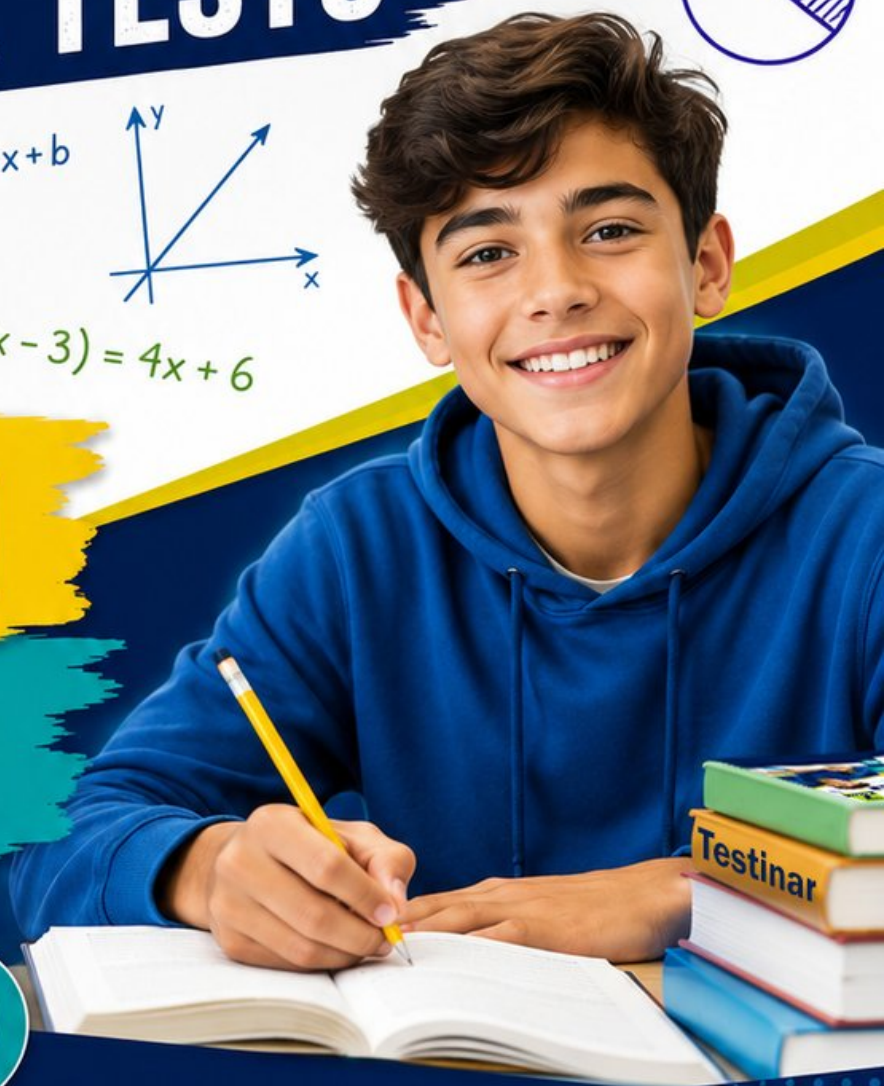
Strengthen
Math Skills



Detailed Answers
& Explanations



Improve Test
Performance



6 Missouri MAP Grade 7 Math Practice Tests

Standards-Aligned Practice with Review, Answer Keys, and Explanations



Six 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!

Six focused rounds for sharper MAP math thinking

This book gives you six 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 six-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?

Six MAP tests, 240 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.
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.

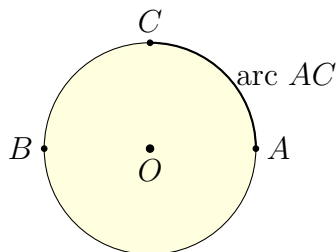


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- 1) In the circle below, which of the following is an arc?



- ☐ A. The segment OA
- ☐ B. The curve from A to C
- ☐ C. The chord AC
- ☐ D. The point O
- 2) Three workers complete $\frac{2}{3}$ of a project equally in 1 day. How much does each worker complete?
- ☐ A. $\frac{1}{9}$ of the project
- ☐ B. $\frac{3}{2}$ of the project
- ☐ C. $\frac{2}{3}$ of the project
- ☐ D. $\frac{2}{9}$ of the project
- 3) A model train set has a scale of $1 : 87$. If the model is 12 cm long, how many centimeters long is the actual train (to the nearest whole number)?

- 4) A shirt costs \$35 and socks cost \$4 per pair. If you buy 1 shirt and p pairs of socks for a total of \$51, how many pairs of socks did you buy?
- ☐ A. 2 pairs
- ☐ B. 4 pairs
- ☐ C. 6 pairs
- ☐ D. 8 pairs



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

6) Two groups of students took a math test. Group 1: mean = 82, median = 85. Group 2: mean = 82, median = 80. What does this tell us?

☐ A. Group 1 has higher scores in the upper half

☐ C. Both groups are identical

☐ D. Group 1 has outliers on the low end

☐ B. Group 2 performed better overall

7) A two-way table shows outcomes for tossing a coin and rolling a die showing 1, 2, or 3. What is the total number of outcomes?

	1	2	3
H	H1	H2	H3
T	T1	T2	T3

☐ A. 2 outcomes

☐ C. 5 outcomes

☐ B. 3 outcomes

☐ D. 6 outcomes

8) A cylinder has lateral surface area = $2\pi rh = 100.48 \text{ m}^2$ and radius 4 m. What is the height? Use $\pi \approx 3.14$.

☐ A. 2 m

☐ C. 4.5 m

☐ B. 4 m

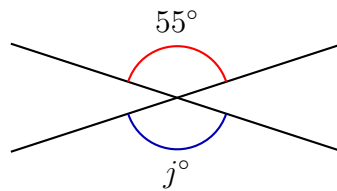
☐ D. 8 m



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- 9) A dot plot shows the number of hours 10 students studied for a math test. The data is: 1, 1, 1, 2, 2, 2, 2, 3, 4, 5. What is the median?
- ☐ A. 1 hour ☐ C. 3 hours
☐ B. 2 hours ☐ D. 5 hours
- 10) A six-sided die has the faces labeled 1, 1, 2, 4, 5, 6 (one face shows 1 twice and there is no 3). Each face is equally likely. What is the probability of rolling a 1 or 2?
- ☐ A. $\frac{1}{2}$ ☐ C. $\frac{1}{4}$
☐ B. $\frac{2}{6}$ ☐ D. $\frac{4}{6}$
- 11) Consider the sample space for flipping a coin and rolling a die. How many total possible outcomes are there?
- ☐ A. 6 ☐ C. 12
☐ B. 8 ☐ D. 24
- 12) A penny, nickel, and dime were tossed together 200 times. The number of times exactly 2 coins landed on heads was 53. What is the experimental probability of getting exactly 2 heads when tossing the three coins?
- ☐ A. $\frac{2}{3}$ ☐ C. 0.27
☐ B. $\frac{53}{200}$ ☐ D. 0.375





1)

Two intersecting lines form vertical angles. One angle is marked as 55° . What is the measure of angle j vertically opposite to it?

☐ A. 35° ☐ C. 125° ☐ B. 55° ☐ D. 235°

2) A point is moved from $(-3, 1)$ to $(4, 6)$ by a single transformation. Which of the following best describes this transformation?

☐ A. Translation by $(7, 5)$ ☐ C. Rotation of 90° ☐ B. Reflection over the origin☐ D. Reflection over the x -axis

3) A membership fee was \$200 per year. This year it was raised by 12%. How much is the new fee?

☐ A. \$212☐ C. \$224☐ B. \$220☐ D. \$232

4) An organized list shows all outcomes when drawing one tile from $\{M, A, T\}$ and one from $\{1, 2, 3, 4\}$. How many ordered pairs should the complete list have?

M1, M2, M3, M4, A1, A2, A3, A4, T1, T2, T3, T4

☐ A. 7 pairs☐ C. 12 pairs☐ B. 9 pairs☐ D. 16 pairs

5) A box contains 9 identical items: 3 red, 2 blue, and 4 yellow. Drawing with replacement, which is MORE likely: (R then B) or (B then R)?

- ☐ A. (R then B) is more likely ☐ D. It depends on the order of the items in the box
☐ B. (B then R) is more likely
☐ C. Both have equal probability

6) **Which Estimate is Closest?**

Actual temperature: $72^{\circ}F$

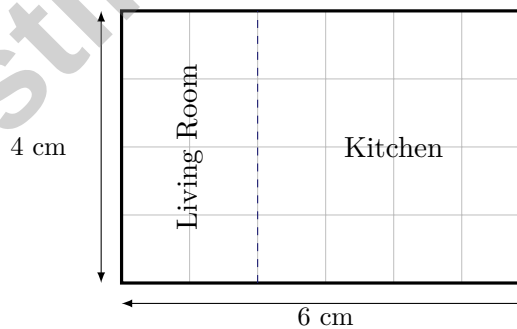
Estimate A: $68^{\circ}F$ Estimate B: $75^{\circ}F$

- ☐ A. Estimate A is closer ☐ C. Cannot determine
☐ B. Both equally close ☐ D. Estimate B is closer

7) Expand: $(2y - 4) \cdot 3$

- ☐ A. $2y - 12$ ☐ C. $6y - 4$
☐ B. $6y - 12$ ☐ D. $5y - 4$

Apartment Layout



8) Scale: 1 cm = 2.5 m

What are the actual dimensions of this apartment?

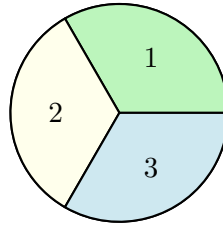
- ☐ A. 6 m $\times$ 4 m ☐ C. 2.4 m $\times$ 1.6 m
☐ B. 24 m $\times$ 16 m ☐ D. 15 m $\times$ 10 m



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- 1) Which expression equals $9x - 2y + 3x + 5y$?
- ☐ A. $12x + 3y$ ☐ C. $6x + 3y$
☐ B. $12x + 7y$ ☐ D. $12xy$
- 2) A rectangular living room has actual dimensions 6 m by 8 m. One scale drawing shows it as 3 cm by 4 cm. What is the scale of this drawing?
- ☐ A. 1 cm : 2 m ☐ C. 1 cm : 4 m
☐ B. 1 cm : 3 m ☐ D. 3 cm : 8 m
- 3) Two similar figures have corresponding sides in the ratio 5 : 8. If the smaller figure has an area of 50 square inches, what is the area of the larger figure?
- ☐ A. 80 square inches ☐ C. 128 square inches
☐ B. 100 square inches ☐ D. 200 square inches
- 4) A circular table has an area of 201.04 square inches. What is the diameter of the table? Use $\pi \approx 3.14$.
- ☐ A. 8 inches ☐ C. 32 inches
☐ B. 16 inches ☐ D. 64 inches
- 5) A student mistakenly calculates the volume of a cylinder with $r = 3$ m and $h = 4$ m by using the formula $V = 2\pi rh$ instead of $V = \pi r^2 h$. Which is the correct volume? Use $\pi \approx 3.14$.
- ☐ A. 75.36 m^3 ☐ C. 150.72 m^3
☐ B. 113.04 m^3 ☐ D. 226.08 m^3





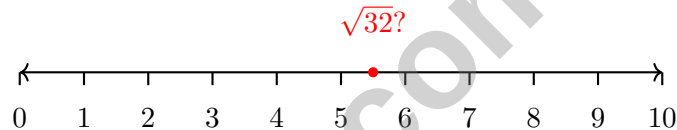
6)

A spinner is divided into 3 equal sections labeled 1, 2, 3. What is the probability of spinning a 2 or a 3?

- ☐ A. $\frac{1}{3}$
☐ B. $\frac{2}{3}$

- ☐ C. $\frac{1}{2}$
☐ D. $\frac{3}{4}$

7)



Is $\sqrt{32}$ closer to 5 or 6?

- ☐ A. closer to 5
☐ B. closer to 6

- ☐ C. exactly halfway
☐ D. cannot be determined

8) A histogram shows test scores for two classes. Class 1 has a tall bar at 90–95 with few lower scores. Class 2 has bars spread from 70 to 95 with a shorter peak around 80. Which statement is most accurate?

- ☐ A. Class 1 performed better with less variation
☐ B. Class 2 had more students overall
☐ C. Both classes have identical score distributions
☐ D. Class 2 has higher average scores



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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)** An arc is a part of the circle's circumference. The curve from A to C is an arc.
- 2) **Choice D is correct.** **(7.RP.1-7.RP.3)** Each worker: $\frac{2/3}{3} = \frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$ of the project.
- 3) **The correct answer is 1044.** **(7.G.1-7.G.5)** Actual length = $12 \times 87 = 1044$ cm. This is approximately 10.44 meters.
- 4) **Choice B is correct.** **(7.EE.3-7.EE.4)** Set up: $35 + 4p = 51 \Rightarrow 4p = 16 \Rightarrow p = 4$.
- 5) **Choice C is correct.** **(7.SP.1-7.SP.4)** A sample of 100 students balances accuracy with practicality. Samples of 10 and 25 are too small to reliably represent the whole school; 1000 would give similar accuracy but be costly and time-consuming to conduct.
- 6) **Choice D is correct.** **(7.SP.1-7.SP.4)** Group 1 has mean 82 but median 85. Since median is higher than mean, there are likely some very low scores pulling the mean down (low outliers).
- 7) **Choice D is correct.** **(7.SP.5-7.SP.8)** The table has 2 rows (H, T) and 3 columns (1, 2, 3). Total: $2 \times 3 = 6$ outcomes.
- 8) **Choice B is correct.** **(7.G.4-7.G.6)** $100.48 = 2(3.14)(4)(h) \Rightarrow 100.48 = 25.12h \Rightarrow h = 4$ m.
- 9) **Choice B is correct.** **(7.SP.1-7.SP.4)** With 10 data points, the median is the average of the 5th and 6th values. Ordered: 1, 1, 1, 2, 2, 2, 3, 4, 5. The 5th and 6th values are both 2, so median = 2 hours.
- 10) **Choice A is correct.** **(7.SP.5-7.SP.8)** Faces showing 1 or 2: 3 (two 1s and one 2). $P(1 \text{ or } 2) = \frac{3}{6} = \frac{1}{2}$.
- 11) **Choice C is correct.** **(7.SP.5-7.SP.8)** Coin outcomes: 2 (H, T); Die outcomes: 6. Total: $2 \times 6 = 12$.
- 12) **Choice B is correct.** **(7.SP.6)** Exactly 2 heads occurred 53 times in 200 tosses. Experimental probability = $\frac{53}{200} = 0.265 \approx 0.27$.
- 13) **Choice B is correct.** **(7.SP.1-7.SP.4)** After removing 49 from stem 4 and correcting to 94 in stem 9, the maximum becomes 107 (stem 10, leaf 7).
- 14) **Choice B is correct.** **(7.SP.5-7.SP.8)** Probability is always between 0 and 1 (inclusive). Only 0.35 fits.
- 15) **Choice C is correct.** **(7.RP.3)** Percent error = $\frac{|450-500|}{500} \times 100\% = \frac{50}{500} \times 100\% = 10\%$.
- 16) **The correct answer is 44.** **(7.G.4-7.G.6)** $C = 2\pi r = 2 \times \frac{22}{7} \times 7 = 2 \times 22 = 44$ cm.
- 17) **Choice A is correct.** **(7.EE.1-7.EE.2)** Distribute -2 : $-2(x) - 2(4) = -2x - 8$. Negative times positive is negative.
- 18) **Choice C is correct.** **(7.RP.1-7.RP.3)** Divide actual dimensions by scale: $15 \div 5 = 3$ inches; $10 \div 5 = 2$ inches.
- 19) **Choice D is correct.** **(7.RP.3)** Markup = $0.35 \times 600 = \$210$. Selling price = $600 + 210 = \$810$.
- 20) **Choice D is correct.** **(7.NS.1-7.NS.3)** $-8 - (-2) = -8 + 2 = -6$. Subtracting the negative shifts right by 2 on the number line.
- 21) **The correct answer is A,B.** **(7.G.1-7.G.5)** Correct answers: (A) $(1, 0) \rightarrow (1 + 2, 0 + 3) = (3, 3) \rightarrow (-3, 3)$. (B) $(0, 0) \rightarrow (2, 3) \rightarrow (-2, 3)$. Both steps verified. Distractors: (C) True but not a unique property of this transformation (all rigid transformations preserve congruence). (D) False—rigid transformations do not change size.
- 22) **Choice A is correct.** **(7.SP.1-7.SP.4)** $75 \div 500 \times 100 = 0.15 \times 100 = 15\%$.
- 23) **Choice D is correct.** **(7.RP.3)** First find the whole: $56 = 0.70 \times n$, so $n = 80$. Then 30% of 80 is $0.30 \times 80 = 24$.
- 24) **Choice A is correct.** **(7.NS.1b)** Start at -3 and move 7 units to the right to reach 4. Options B, C, and D either move in the wrong direction or start at the wrong point.
- 25) **Choice B is correct.** **(7.EE.1-7.EE.2)** Substitute: $-3(5 - 2) = -3(3) = -9$.
- 26) **Choice A is correct.** **(7.EE.1)** Combine like terms: $(-2m - 5m) + (3n + n) = -7m + 4n$.
- 27) **Choice B is correct.** **(7.EE.1-7.EE.2)** Find GCF of 8, 12, 16, 24. Factors of 8: 1, 2, 4, 8. Factors of 12: 1, 2, 3, 4, 6, 12. Factors of 16: 1, 2, 4, 8, 16. Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24. The GCF of all four is 4.
- 28) **Choice B is correct.** **(7.EE.4b)** Check $x = 4$: $3(4) - 2 = 10 \leq 10$ ✓. Check $x = 5$: $3(5) - 2 = 13 \not\leq 10$. Check $x = 8$: $3(8) - 2 = 22 \not\leq 10$.
- 29) **Choice C is correct.** **(7.RP.1-7.RP.3)** Proportional: no constant term. Option C has -7 (constant), so not proportional.
- 30) **The correct answer is 10.** **(7.G.4-7.G.6)** From $A = \pi r^2$: $314 = 3.14 \times r^2 \Rightarrow r^2 = 100 \Rightarrow r = 10$ m.
- 31) **Choice D is correct.** **(7.RP.1-7.RP.3)** The unit rate is 0.9 (from the point $(1, 0.9)$). When $x = 5$, $y = 5 \times 0.9 = 4.5$.



Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 6 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **6** 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:

6 Full-Length Printed Tests

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!

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- ✓ 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.



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