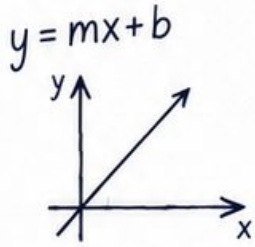
4 Mississippi MAAP

GRADE 7 MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



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

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

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 Mississippi MAAP Grade 7 Math Practice Tests

Four Grade 7 Tests with Mississippi Review and Clear Answers

Four complete 40-question Grade 7 MAAP 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, Mississippi Grade 7 Problem Solver!

Four focused rounds for sharper MAAP math thinking

This book gives you four full Grade 7 MAAP 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 Mississippi 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.

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.

Mississippi 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 MAAP 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.

Table of Contents

1) A student compared two dot plots and made this claim: "Distribution A has a median of 50 and Distribution B has a median of 55, so B is always greater." Identify the error.

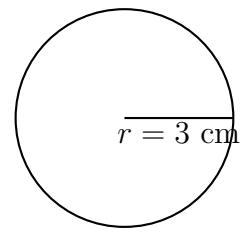
☐ A. Median is typical value, not a guarantee; distributions can overlap
☐ B. Medians are always accurate
☐ C. Distribution A must be higher
☐ D. Comparison requires ranges, not medians

2) If two similar rectangles have areas of 12 square cm and 48 square cm, what is the scale factor from the smaller to the larger rectangle?

☐ A. 2
☐ B. 4
☐ C. 2.45
☐ D. $\sqrt{12}$

3) If $a + (-a) = 0$, and $a = 27$, what is the value of $-a$?

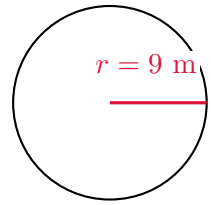
4)



Based on the diagram, what is the circumference of the circle? Use $\pi \approx 3.14$.

☐ A. 9.42 cm
☐ B. 18.84 cm
☐ C. 28.26 cm
☐ D. 56.52 cm

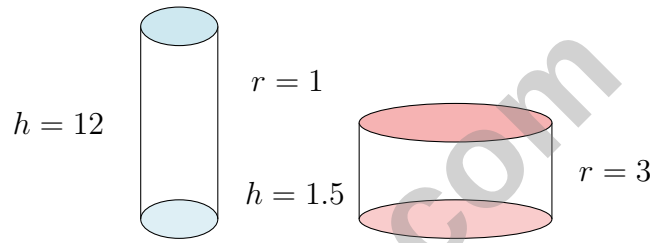
5)



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

- ☐ A. 56.52 m^2
- ☐ B. 113.04 m^2
- ☐ C. 254.34 m^2
- ☐ D. 508.68 m^2

6)



Cylinder A has $r = 1$ and $h = 12$. Cylinder B has $r = 3$ and $h = 1.5$. Use $\pi \approx 3.14$. Which statement is true?

- ☐ A. Cylinder A has the greater volume
- ☐ B. Cylinder B has the greater volume
- ☐ C. Both cylinders have the same volume
- ☐ D. Volume cannot be compared without units

7) 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
- ☐ B. Group 2 performed better overall
- ☐ C. Both groups are identical
- ☐ D. Group 1 has outliers on the low end

8) A dot plot shows quiz scores: 70 (one student), 75 (two students), 80 (four students), 85 (two students), 90 (one student). Which statement is correct?

☐ A. The median is 70
☐ B. The median is 80
☐ C. The median is 85
☐ D. The median is 90

9) A spinner is divided into 8 equal sections numbered 1 through 8. What is the probability of spinning an odd number OR a prime number?

☐ A. $\frac{4}{8}$ (only odd)
☐ B. $\frac{6}{8}$ (missing overlap)
☐ C. $\frac{7}{8}$
☐ D. $\frac{8}{8}$ (all outcomes)

10) A researcher rolled a number cube 500 times and recorded the results:

Face	1	2	3	4	5	6
Times	82	88	79	85	90	96

Which face has an experimental probability closest to the theoretical probability of $\frac{1}{6}$?

☐ A. Face 1
☐ B. Face 3
☐ C. Face 5
☐ D. Face 6

11) A park is shaped like a large rectangle (30 m × 20 m) with a triangular picnic area (20 m base, 5 m height) and a circular pond (radius 3 m) inside. What is the open grassy area? (Use $\pi \approx 3.14$.)

☐ A. 521.74 m^2
☐ B. 550 m^2
☐ C. 571.74 m^2
☐ D. 600 m^2

1) A server at a restaurant receives a total of \$18 in tips on a \$120 bill. What percentage tip did the customer leave?

☐ A. 12%
☐ B. 20%
☐ C. 18%
☐ D. 15%

2) What is $-\frac{7}{8} \times 8$?

☐ A. -7
☐ B. -8
☐ C. 1
☐ D. 7

3) 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. $p + 7$

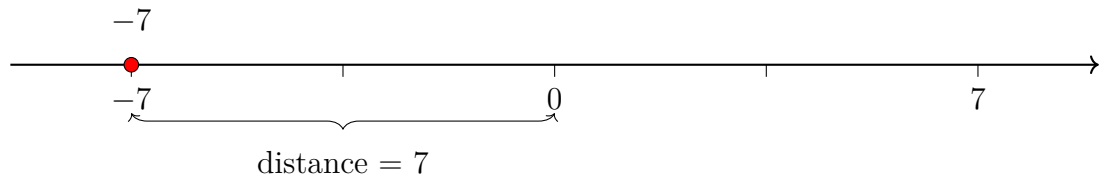
4) A bread recipe yields 3 loaves and calls for 4.5 cups flour. How much flour is needed for 1 loaf?

☐ A. 2 cups
☐ B. 1.25 cups
☐ C. 1 cup
☐ D. 1.5 cups

5) A rectangle is inscribed in a circle. One side is 8 cm and an adjacent side is 6 cm. Is there a unique rectangle that satisfies these conditions?

☐ A. Yes, exactly one
☐ B. No, infinitely many
☐ C. No, but there are exactly two
☐ D. No rectangle fits these conditions

6) What is $|-7|$?



- ☐ A. -7 (confuses absolute value with the original number)
- ☐ B. -14 (incorrectly applies a sign reversal)
- ☐ C. 0 (misplaces absolute value at the origin)
- ☐ D. 7 (correct; distance is always non-negative)

7) A rectangular prism has length 7 in, width 5 in, and height 4 in. If each dimension is increased by 1 inch, by how much does the surface area increase?

- ☐ A. 24 in^2
- ☐ B. 48 in^2
- ☐ C. 70 in^2
- ☐ D. 96 in^2

8) Simplify: $\frac{1}{2}a + \frac{1}{4}a$

- ☐ A. $\frac{1}{8}a$
- ☐ B. $\frac{1}{6}a$
- ☐ C. $\frac{3}{4}a$
- ☐ D. $\frac{2}{6}a$

9) Factor: $7a + 14b$

- ☐ A. $7(a + 2b)$
- ☐ B. $7a(1 + b)$
- ☐ C. $14(a + b)$
- ☐ D. $a(7 + 14b)$

10) To simulate drawing a card from a standard deck and finding whether it is a heart (probability $\frac{1}{4}$), which spinner design is best?

- ☐ A. Spinner with 2 equal sections (one shaded, one not)
- ☐ B. Spinner with 4 equal sections (one shaded, three not)
- ☐ C. Spinner with 6 equal sections (two shaded, four not)
- ☐ D. Spinner with 13 equal sections (one shaded, twelve not)

1) Identify the correct factorization of $-9m - 12$:

☐ A. $-3(3m + 4)$
☐ B. $3(-3m - 4)$
☐ C. $-3(3m - 4)$
☐ D. $9(-m - 1.33)$

2) A scale drawing uses a scale of 1 inch = 50 feet. If a building is represented by 2.75 inches on the drawing, what is the actual height of the building?

3) Two box plots show the test scores of Class A (median = 82, range = 30) and Class B (median = 78, range = 14). The box plot for Class A spans from 67 to 97; Class B spans from 71 to 85. Which statement is best supported by the visuals?

☐ A. Class A and Class B score ranges overlap from 71 to 85
☐ B. Class A's scores varied more and its typical score was higher
☐ C. Class B is always worse regardless of median
☐ D. Class A has higher minimum but Class B more consistent

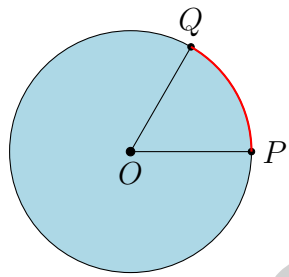
4) A composite shape is made of two triangles sharing a common base. The base is 6 cm and each triangle has a height of 4 cm. What is the combined area?

☐ A. 12 cm^2
☐ B. 24 cm^2
☐ C. 36 cm^2
☐ D. 48 cm^2

5) A rectangular prism has a length of 20 cm. The width is half the length. The height is 10 cm. What is the volume?

☐ A. 1,200 cm^3
☐ B. 2,000 cm^3
☐ C. 4,000 cm^3
☐ D. 2,400 cm^3

6) In the circle below, which shaded region represents a sector?



The red shaded region is:

☐ A. A chord
☐ B. A sector
☐ C. An arc
☐ D. A radius

7) A triangle has one side of length 11 cm. If the other two sides each have length x cm, for which values of x can a valid triangle be formed?

☐ A. Any positive value of x
☐ B. $0 < x \leq 11$
☐ C. $5.5 < x$
☐ D. $x \geq 11$

8) A cube's edge length is s cm. If the surface area is 600 cm^2, which equation correctly represents this relationship?

☐ A. $6s = 600$
☐ B. $s^3 = 600$
☐ C. $6s^2 = 600$
☐ D. $2s + 2s + 2s = 600$

Mississippi MAAP 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 Mississippi MAAP practice test.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice A is correct.** 7.SP.3 Median shows the center/typical value. Even if B's median (55) exceeds A's (50), overlap means some values in A exceed some in B. Median comparison shows typical difference, not individual comparisons.
2) **Choice A is correct.** 7.G.1-7.G.5 The area ratio is $\frac{48}{12} = 4$. Since area scales by (scale factor)^2, we have (scale factor)$^2 = 4$, so scale factor $= 2$.
3) **The correct answer is** -27 **.** 7.NS.1-7.NS.3 Since $a = 27$, the opposite (additive inverse) is $-a = -27$. We can verify: $27 + (-27) = 0$.
4) **Choice B is correct.** 7.G.4-7.G.6 $C = 2\pi r = 2 \times 3.14 \times 3 = 18.84$ cm.
5) **Choice C is correct.** 7.G.4-7.G.6 $A = 3.14 \times 9^2 = 3.14 \times 81 = 254.34$ m^2.
6) **Choice B is correct.** 7.G.4-7.G.6 A: $V = \pi r^2 h = 3.14 \times (1)^2 \times 12 = 3.14 \times 1 \times 12 = 37.68$ units^3. B: $V = 3.14 \times (3)^2 \times 1.5 = 3.14 \times 9 \times 1.5 = 42.39$ units^3. Cylinder B is greater.
7) **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).
8) **Choice B is correct.** 7.SP.1-7.SP.4 With 10 students total, the median is between the 5th and 6th values: positions 1 (70), 2–3 (75), 4–7 (80). The 5th and 6th values are both 80, so median = 80.
9) **Choice C is correct.** 7.SP.5-7.SP.8 Odd: 1, 3, 5, 7; Prime: 2, 3, 5, 7. Union: 1, 2, 3, 5, 7 = 7 out of 8.
10) **Choice B is correct.** 7.SP.6 Face 3: $\frac{79}{500} = 0.158$. Theoretical: $\frac{1}{6} \approx 0.167$. Difference: $|0.158 - 0.167| \approx 0.009$, smallest among all faces.
11) **Choice A is correct.** 7.G.4-7.G.6 Rectangle: $30 \times 20 = 600$ m^2. Triangle: $\frac{1}{2} \times 20 \times 5 = 50$ m^2. Pond: $3.14 \times 9 = 28.26$ m^2. Grass: $600 - 50 - 28.26 = 521.74$ m^2.
12) **Choice C is correct.** 7.SP.1-7.SP.4 Scores in range $[72, 86]$: $72, 72, 74, 78, 81, 83, 86$ (from stems 7 and 8). Total: 7 scores.
13) **Choice C is correct.** 7.G.4-7.G.6 $h = \frac{V}{l \times w} = \frac{500}{10 \times 5} = \frac{500}{50} = 10$ inches.
14) **Choice C is correct.** 7.G.4-7.G.6 Concentric circles share the same center. M is at the center of both circles.
15) **Choice D is correct.** 7.G.1-7.G.5 AAA (Angle–Angle–Angle) guarantees similarity, not congruence. The triangles could be different sizes but the same shape. At least one side length is needed to prove congruence.
16) **Choice B is correct.** 7.SP.5-7.SP.8 Every number from 1 to 10 is less than 11, so this event is certain (probability = 1).
17) **Choice B is correct.** 7.SP.1-7.SP.4 $\frac{45}{120} = \frac{x}{840}$. Reduce to $\frac{3}{8} = \frac{x}{840} \Rightarrow x = 315$.
18) **Choice D is correct.** 7.RP.1-7.RP.3 Convert 25 feet to inches: $25 \times 12 = 300$ inches. Scale $= 5 : 300 = 1 : 60$.
19) **Choice D is correct.** 7.RP.3 Discount percent $= \frac{3}{15} \times 100 = 20\%$.
20) **Choice A is correct.** 7.SP.1-7.SP.4 $108° \div 360° \times 100 = 30\%$.
21) **The correct answer is B,C.** 7.RP.1-7.RP.3 Option B: cost $= 1.50 \times$ pounds (proportional, of form $y = kx$). Option C: distance = speed $\times$ time (proportional). Option A is a general trend but not a strict proportional relationship. Option D: height does not scale proportionally with age (growth rates vary).
22) **Choice D is correct.** 7.RP.1-7.RP.3 Proportion: $\frac{2 \text{ gal}}{1 \text{ sq ft}} = \frac{y}{12 \text{ sq ft}}$. Cross multiply: $y = 24$ gallons.
23) **Choice D is correct.** 7.RP.1-7.RP.3 The unit-rate point $(1, 0.8)$ directly shows the hourly wage: \$0.80 per hour.
24) **Choice D is correct.** 7.RP.1-7.RP.3 Painter A: $\frac{1/2}{1/3} = \frac{1}{2} \times 3 = \frac{3}{2}$ walls/day. Painter B: $\frac{2/3}{1/2} = \frac{2}{3} \times 2 = \frac{4}{3}$ walls/day. A is faster: $\frac{3}{2} = 1.5 > \frac{4}{3} \approx 1.33$.
25) **Choice D is correct.** 7.RP.1-7.RP.3 The constant k in $C = kn$ represents the cost per student. In the first, $k = 15$ (dollars per student); in the second, $k = 20$ (dollars per student). Different constants mean different unit prices.
26) **Choice D is correct.** 7.RP.3 Using the proportion $\frac{40}{100} = \frac{d}{1}$ where d is the decimal, divide: $\frac{40}{100} = 0.4$.
27) **Choice D is correct.** 7.SP.5-7.SP.8 5 is not on the spinner, so $P(5) = 0$. The others are correct.

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 4 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 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:

- 4 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!

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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PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY