

10

Mississippi

MAAP

GRADE

8

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

10

PRINTED
TESTS



2

ONLINE
TESTS



Build Confidence



Master Key Math Skills

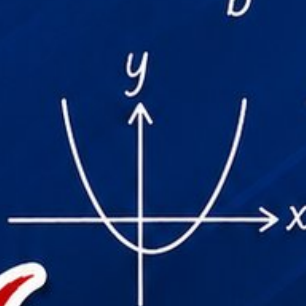
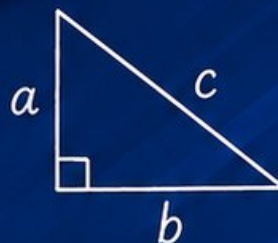


Answer Explanations for
Every Question



Test-Taking Strategies
That Work

$$y = mx + b$$



$$3x - 7 = 2(x + 5)$$
$$x = 17$$



USE THESE TWO
**ADDITIONAL ONLINE
PRACTICE TESTS**

FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.

10 Mississippi MAAP Grade 8 Math Practice Tests

Mississippi Grade 8 MAAP Practice for river-clear preparation in rates, rate of change, expressions, geometry, data analysis, and probability



Ten complete 40-question Grade 8 MAAP practice rounds with linear relationships, scientific notation, real numbers, equations, functions, geometry, data analysis, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Mississippi Grade 8 Problem Solver!

Ten focused rounds for sharper Mississippi MAAP math thinking

This book gives you ten full Grade 8 MAAP math practice tests. Each round is built to help you notice structure, compare quantities, use linear reasoning, handle real numbers, and explain your thinking with care.

Grade 8 standards focus: This page supports **The Pythagorean Theorem** (8.G.7): Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. The same routine helps with **Interior Angles of Polygons** (8.G.5): Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and....

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.

Read

Model

Verify

How to Use This Book

A ten-session plan for confident Grade 8 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.

Grade 8 standards focus: Keep the routine connected to **Scatter Plots and Patterns in Data** (8.SP.1): Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association. You will also meet **Turning Repeating Decimals into Fractions** (8.NS.A): Convert a decimal expansion which repeats eventually into a rational number.

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?

Ten Mississippi MAAP tests, 400 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Linear relationships, integer exponents, scientific notation, real-number reasoning, and careful reading.
Tests 4–6	Expressions, equations, inequalities, transformations, geometry, and multi-step problem solving.
Tests 7–9	Data analysis, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final Mississippi 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 8 success means recognizing which idea is being tested even when the next question changes format.

Grade 8 standards focus: Use these habits while practicing **Two-Way Tables for Categorical Data** (8.SP.4): Understand that patterns of association can be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. A second useful connection is **Understanding Scientific Notation** (8.EE.3): Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities.



Scan me!
For more practice
& answers

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- 1) A transversal intersects two parallel lines. One of the angles formed is 123° . What is the measure of the adjacent angle on the same side of the transversal?

☐ A. 57°
☐ C. 180°
☐ B. 123°
☐ D. 246°

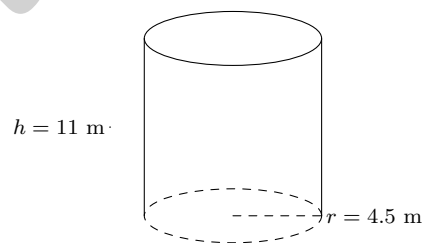
- 2) A principal of \$3,000 is invested at 5% compound interest annually. What is the amount after 2 years (rounded to nearest cent)?

- 3) A student calculates the surface area of a rectangular prism with dimensions $3\text{ m} \times 4\text{ m} \times 5\text{ m}$ as: $SA = 2(3 \times 4) + 2(3 \times 5) + 2(4 \times 5) = 24 + 30 + 40 = 94\text{ m}^2$. What is the error?

☐ A. The calculation is correct

☐ C. The student missed the bottom face

☐ B. The student forgot to add the second base

☐ D. The student mixed up length and width


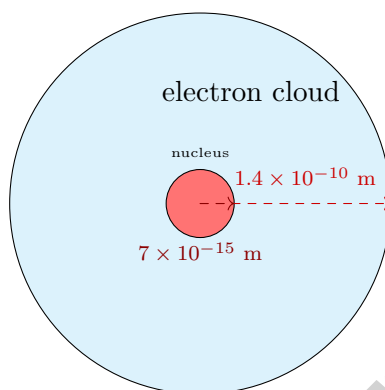
4)

A cylinder with radius 4.5 m and height 11 m is shown. Approximately, what is its volume? (Use $\pi \approx 3.14$.)

☐ A. 280.35 m^3
☐ C. 699.44 m^3
☐ B. 560.7 m^3
☐ D. 1401.56 m^3


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& answers

- 5) A gold nucleus has a radius of about 7×10^{-15} meters. The electron cloud of a gold atom extends to about 1.4×10^{-10} meters. The atomic radius is how many times the nuclear radius?



- ☐ A. 0.5×10^5
☐ C. 2×10^4
☐ B. 5×10^4
☐ D. 2×10^5
- 6) Solve by substitution:
$$\begin{cases} y = -x + 7 \\ 2x + y = 10 \end{cases}$$
- ☐ A. (2, 5)
 ☐ C. (4, 3)
☐ B. (5, 2)
 ☐ D. (3, 4)

- 7) If $\frac{b^n}{b^4} = b^6$, what is the value of n ?



8) Which of the following graphs represents a function?

☐ A. A vertical line.

☐ C. A point.

☐ B. A circle.

☐ D. An ellipse centered at the origin.

9) Function $h(x) = -2x + 7$ and function k shown in the table: $(0, 7)$, $(1, 5)$, $(2, 3)$. Which statement is true?

x	0	1	2
$k(x)$	7	5	3

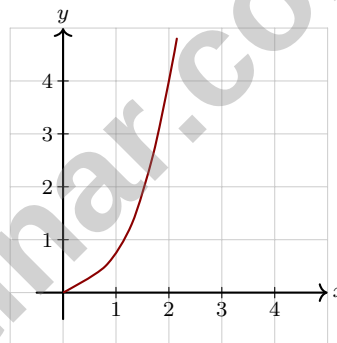
☐ A. h has a steeper slope than k .

☐ C. Both have equal slopes.

☐ B. k has a steeper slope than h .

☐ D. The slopes cannot be compared.

10) Which graph represents a NONLINEAR function?



☐ A. Yes, the curve is parabolic

☐ C. Yes, it only has positive y -values

☐ B. No, it starts at the origin

☐ D. No, the points are integers



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& answers

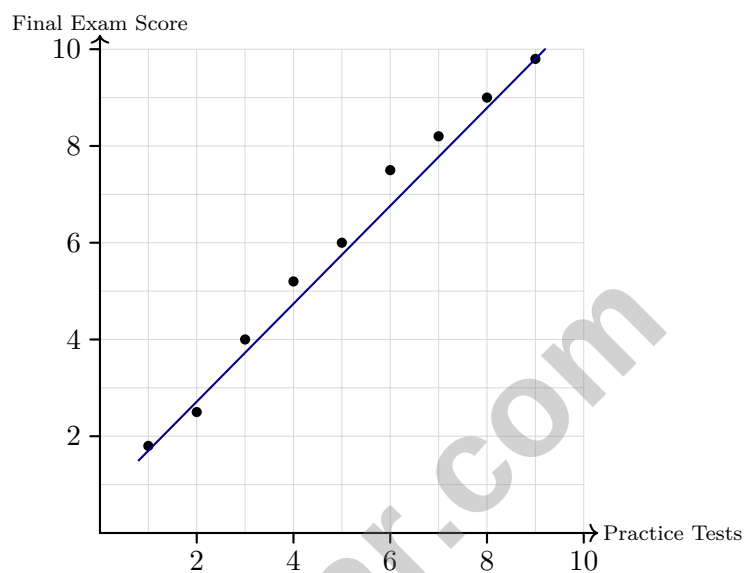
1) What is $\sqrt{361}$?

☐ A. 18

☐ C. 20

☐ B. 21

☐ D. 19



2)

A student takes 5 practice tests. Based on the trend line, what is the predicted final exam score?

☐ A. Approximately 5

☐ C. Approximately 7

☐ B. Approximately 6

☐ D. Approximately 8

3) A table shows:

x	0	3	6
y	5	2	-1

What is the rate of change (slope)?



- 4) A paint shop mixes white and colored paint. They want to make 50 liters of paint that is 60% colored. If they have unlimited supplies of 100% colored and 0% colored (white) paint, how many liters of colored paint do they need?

- ☐ A. 20 L ☐ C. 30 L
☐ B. 40 L ☐ D. 45 L

- 5) The table below shows values of function f . What is $f(2)$?

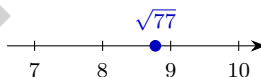
x	0	1	2	3
$f(x)$	5	7	9	11

- ☐ A. 7 ☐ C. 11
☐ B. 9 ☐ D. 5

- 6) If $x = \sqrt{144}$, is x rational or irrational?

- ☐ A. Irrational; $x = 144$ ☐ C. Irrational; $x = 12$
☐ B. Rational; $x = 144$ ☐ D. Rational; $x = 12$

- 7) Where on a number line would $\sqrt{77}$ be located?



- ☐ A. At 9 ☐ C. Between 8 and 9
☐ B. Between 9 and 10 ☐ D. Between 7 and 8

- 8) Is π^2 greater than or less than $(3.1)^2$?

- ☐ A. Cannot be determined ☐ C. Exactly equal to $(3.1)^2$
☐ B. Less than $(3.1)^2$ ☐ D. Greater than $(3.1)^2$



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& answers

1) Which equals $0.\overline{27}$?

☐ A. $\frac{27}{100}$

☐ B. $\frac{1}{27}$

☐ C. $\frac{27}{90}$

☐ D. $\frac{27}{99} = \frac{3}{11}$

2) Which value is closest to $\sqrt{35}$?

☐ A. 5

☐ B. 7

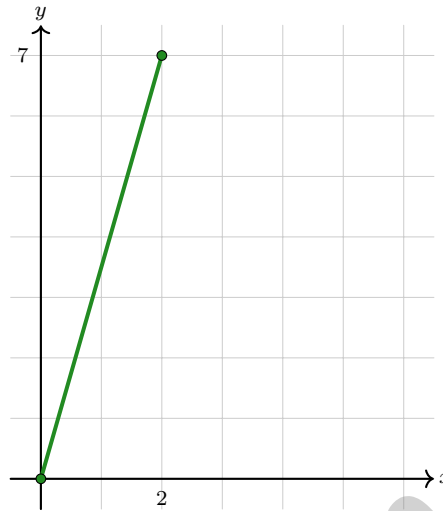
☐ C. 6

☐ D. 5.8

3) Use the table below to find the y -intercept of the linear function:

x	1	3	5
y	9	17	25





4)

The constant of proportionality is:

☐ A. $\frac{2}{7}$

☐ B. 7

☐ C. 2

☐ D. $\frac{7}{2}$

5) Which trinomial is equivalent to $(x - 8)(x + 3)$?

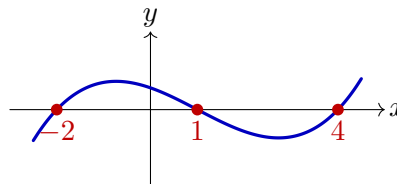
☐ A. $x^2 - 24$

☐ B. $x^2 - 5x - 24$

☐ C. $x^2 + 11x - 24$

☐ D. $x^2 - 24x + 3$

6) A graph of a function crosses the x -axis at $x = -2$, $x = 1$, and $x = 4$. How many sign intervals do these intercepts create?





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& answers

Mississippi MAAP Grade 8 Practice Test Answer Keys**How to use this section with a Grade 8 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.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (8.G.5) Adjacent angles on a straight line are supplementary: $123 + x = 180$, so $x = 57^\circ$.
- 2) **The correct answer is \$3,307.50.** (8.EE.5) $A = 3000(1.05)^2 = 3000 \times 1.1025 = \$3,307.50$.
- 3) **Choice A is correct.** (8.G.9) The student correctly calculated $SA = 2(12) + 2(15) + 2(20) = 24 + 30 + 40 = 94 \text{ m}^2$. The formula $2(lw + lh + wh)$ accounts for all six faces (two of each type).
- 4) **Choice C is correct.** (8.G.9) $V = \pi r^2 h = 3.14 \times 20.25 \times 11 = 3.14 \times 222.75 = 699.44 \text{ m}^3$.
- 5) **Choice C is correct.** (8.EE.4) $\frac{1.4 \times 10^{-10}}{7 \times 10^{-15}} = \frac{1.4}{7} \times 10^5 = 0.2 \times 10^5 = 2 \times 10^4$.
- 6) **Choice D is correct.** (8.EE.8a) Substitute $y = -x + 7$ into $2x + y = 10$: $2x + (-x + 7) = 10$, so $x + 7 = 10$, giving $x = 3$. Then $y = -3 + 7 = 4$. Solution: (3, 4).
- 7) **The correct answer is 10.** (8.EE.1) Using the quotient rule, $n - 4 = 6$, so $n = 10$. Verification: $\frac{b^{10}}{b^4} = b^6$.
- 8) **Choice C is correct.** (8.F.1) A point has one x -value with one y -value, so it passes the vertical line test. A vertical line is not a function (fails VLT). Circles and ellipses fail the VLT.
- 9) **Choice C is correct.** (8.F.2) Slope of h : -2 . From k 's table: $(5 - 7)/(1 - 0) = -2$. Both have slope -2 .
- 10) **Choice A is correct.** (8.F.3) A nonlinear function does not form a straight line. This graph shows a parabola (curved shape), characteristic of a quadratic or nonlinear function.
- 11) **Choice A is correct.** (8.F.B) Initial length is 10 cm (when $w = 0$). Change from 2 to 4 weights: length goes from 14 to 18 cm, a change of 4 cm for 2 weights, so slope is 2. Equation: $L = 2w + 10$.
- 12) **Choice D is correct.** (8.G.2) Reflection is a rigid motion that preserves side lengths. The reflected rhombus has sides of 8 cm.
- 13) **Choice B is correct.** (8.G.3) Left means subtract from x ; up means add to y . The rule is $(x, y) \rightarrow (x - 5, y + 8)$.
- 14) **Choice A is correct.** (8.G.6, 8.G.7) The ramp surface is the hypotenuse of a right triangle: $\sqrt{3^2 + 4^2} = \sqrt{9 + 16} = \sqrt{25} = 5$ feet (the 3-4-5 triple).
- 15) **Choice A is correct.** (8.G.8) Check: $15^2 + 20^2 = 225 + 400 = 625 = 25^2$. Yes, it's a Pythagorean triple (a multiple of 3-4-5).
- 16) **Choice C is correct.** (8.G.7) The supplement of an angle is found by subtracting from 180° : $180 - 29 = 151^\circ$.
- 17) **Choice B is correct.** (8.G.C) Pyramid volume: $V = \frac{1}{3} \times 36 \times 8 = 96 \text{ m}^3$. (A cone with the same base and height would also be $\frac{1}{3}\pi r^2 h$, but this is a pyramid.)
- 18) **Choice B is correct.** (8.G.7) For a semicircle on top of a rectangle, the top edge of the rectangle is NOT part of the perimeter outline; it's replaced by the semicircular arc. The student added both, overcounting.
- 19) **Choice C is correct.** (8.G.5) A hexagon's interior angles add to 720° . The known angles add to $120 + 100 + 90 + 115 + 130 = 555^\circ$, so the missing angle is $720 - 555 = 165^\circ$.
- 20) **Choice B is correct.** (8.SP.1) When points cluster tightly around a line, the correlation is stronger. When points are widely scattered, the correlation is weaker. Students should judge strength by how closely points cluster around an imaginary trend line.
- 21) **Choice B is correct.** (8.SP.3) Residual = actual - predicted = $82 - 85 = -3$. Negative residual means the model overestimated (predicted too high).
- 22) **The correct answer is A,C.** (8.G.7) A is correct: $P(\text{heads}) = \frac{1}{2}$. C is correct: $P(\text{heads and 4}) = \frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$. B is wrong: $P(4) = \frac{1}{6}$. D is wrong: total outcomes = 12. E is wrong: $P(\text{not heads}) = \frac{1}{2}$.
- 23) **Choice B is correct.** (8.G.8) Class Q has larger MAD, indicating varied performance. Students need differentiated instruction because understanding ranges widely. Class P's small MAD suggests consistent mastery.
- 24) **The correct answer is 2.** (8.EE.8b) The boundary line is $y = -\frac{1}{3}x + 2$, whose y -intercept is 2.
- 25) **Choice C is correct.** (8.EE.2) A cube root asks what number cubed gives 100. Since $10^3 = 1000$, 10 is not the cube root of 100.
- 26) **Choice D is correct.** (8.EE.5) Slope = $\frac{\Delta y}{\Delta x} = \frac{6-0}{3-0} = \frac{6}{3} = 2$. The line passes through (0, 0) and (3, 6).



Hi, Strategy Solver!

◇ Grade 8 math rewards students who think before they calculate. You practiced choosing strategies, not just hunting for answers. This full-length book gave you ten complete Grade 8 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** That matters because stronger math students do not use one method for every question. They notice the structure and choose the tool that fits. ★

Strategy Moves

- **Estimate:** Know the neighborhood of the answer.
- **Simplify:** Rewrite numbers in friendlier forms.
- **Model:** Draw what the words describe.
- **Verify:** Put the answer back into the problem.

Grade 8 test-day tip: Pause for ten seconds before hard questions. A short plan can save several minutes.

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

Jay Daie

Your Strategy Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **10** full-length Math practice tests and **2** online tests to help Grade 8 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 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.



**Master
Key Skills**

Develop strong math skills and problem solving abilities.



**Improve
Understanding**

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



**Test
Strategies**

Learn proven strategies to approach every question with confidence.



**Boost
Performance**

Apply your knowledge and achieve your best score!

TOPICS COVERED

- | | |
|---------------------------|----------------------------|
| ✓ The Number System | ✓ Statistics & Probability |
| ✓ Expressions & Equations | ✓ Data Analysis |
| ✓ Inequalities | ✓ Measurement |
| ✓ Functions | ✓ Pythagorean Theorem |
| ✓ Geometry | ✓ Surface Area & Volume |
| ✓ Ratios & Proportions | ✓ 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!



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY