

10 Florida FAST

GRADE
8
MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

10 PRINTED
TESTS

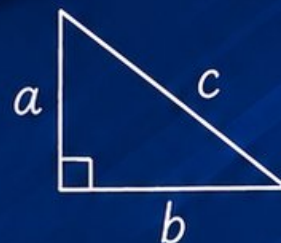


2 ONLINE
TESTS



- ✓ Build Confidence
- ✓ Master Key Math Skills
- ✓ Answer Explanations for Every Question
- ✓ Test-Taking Strategies That Work

$$y = mx + b$$



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

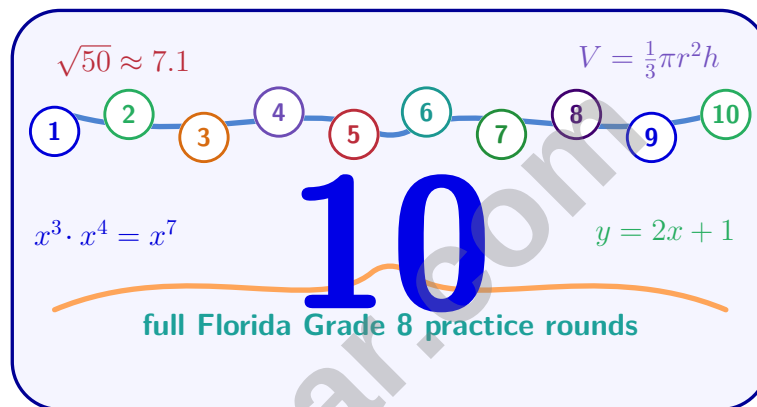


USE THESE TWO
**ADDITIONAL ONLINE
PRACTICE TESTS**

FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.

10 Florida FAST Grade 8 Math Practice Tests

Florida Grade 8 FAST Practice for sunlit practice for exponent reasoning, real numbers, equations, geometry, data, and probability



Ten complete 40-question Grade 8 FAST 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, Florida Grade 8 Problem Solver!

Ten focused rounds for sharper Florida FAST math thinking

This book gives you ten full Grade 8 FAST 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 **Solving Linear Equations in One Variable** (MA.8.AR.2.1): Solve multi-step linear equations in one variable, with rational number coefficients. Include equations with variables on both sides. The same routine helps with **Solving Systems of Two Equations** (MA.8.AR.4.2): Given a system of two linear equations, determine which ordered pairs satisfy the system. Determine whether there is one solution, no solution, or infinitely many solutions.

Your Florida 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 **Solving Linear Inequalities** (MA.8.AR.2.2): Solve two-step linear inequalities in one variable and represent solutions algebraically and on a number line. You will also meet **Reading Function Values** (MA.8.F.1.1): Determine whether a relationship is a function and identify the domain and range of the relation.

Florida 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 Florida FAST 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 Florida 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 **Reading Function Values** (MA.8.F.1.1): Determine whether a relationship is a function and identify the domain and range of the relation. A second useful connection is **Rotations, Reflections, and Translations** (MA.8.GR.2.3): Given a preimage and image, identify the transformation. Describe and apply the effect of a single transformation on two-dimensional figures using coordinates.



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For more practice
& answers

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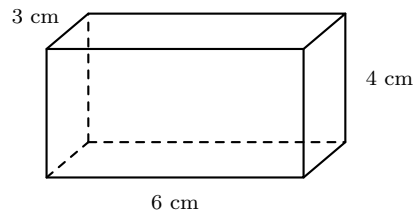
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1) Which number is closest to $\sqrt{50}$?

☐ A. 6

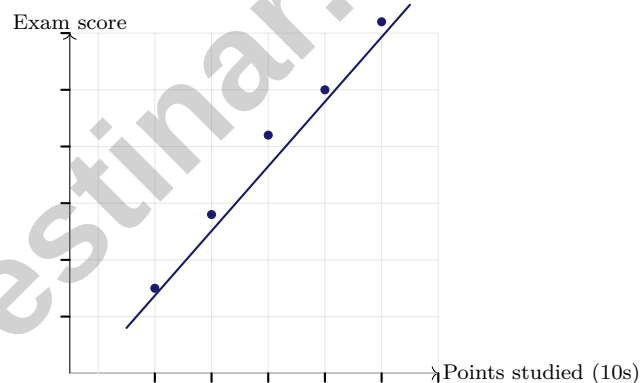
☐ C. 7.1

☐ B. 7

☐ D. 9


2)

A rectangular prism is shown with dimensions $6\text{ cm} \times 4\text{ cm} \times 3\text{ cm}$. What is its surface area?

☐ A. 72 cm^2
☐ C. 144 cm^2
☐ B. 108 cm^2
☐ D. 168 cm^2


3)

A model predicts exam score: $S = 8p - 8$, where p is the number of 10-point topic sets studied. The model gives $S = 32$ at $p = 5$, but the actual score was 35. What is the residual?

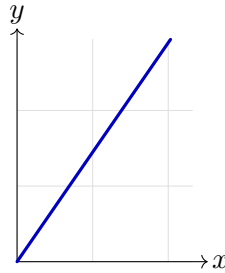
☐ A. -3
☐ C. 35

☐ B. 3

☐ D. 67


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4) Which point must be on the graph of $y = 2x$?



☐ A. (1, 2)

☐ C. (2, 1)

☐ B. (1, 3)

☐ D. (0, 2)

5) Solve for x : $2x + 8 = 20$

☐ A. $x = 6$

☐ C. $x = 28$

☐ B. $x = 14$

☐ D. $x = 4$

6) The system $\begin{cases} 2x - y = 5 \\ 4x - 2y = 10 \end{cases}$ has how many solutions?

☐ A. No solution

☐ C. Exactly two solutions

☐ B. Exactly one solution

☐ D. Infinitely many solutions

7) Which graph represents $y < 2x + 1$?

☐ A. A dashed line $y = 2x + 1$ with shading above

☐ C. A dashed line $y = 2x + 1$ with shading below

☐ B. A solid line $y = 2x + 1$ with shading below

☐ D. A solid line $y = 2x + 1$ with shading above



8) Which relation is a function?

- ☐ A. A student and the clubs they joined (a student may join more than one club).
- ☐ B. A book title and its author (a book has multiple authors).
- ☐ C. A person and the phone numbers they use (a person may use more than one phone number).
- ☐ D. A country and its capital (one country, one capital).

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 .
- ☐ B. k has a steeper slope than h .
- ☐ C. Both have equal slopes.
- ☐ D. The slopes cannot be compared.

10) Looking at the table below, is the function linear or nonlinear?

x	1	2	3	4
y	2	5	10	17
First diff.	3	5	7	

- ☐ A. Linear, because y increases
- ☐ B. Nonlinear, first differences are not constant
- ☐ C. Linear, because the table has 4 points
- ☐ D. Nonlinear, because $y > x$

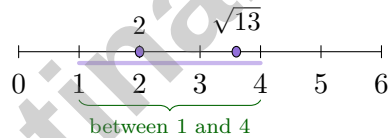
11) A balloon loses 5 cm of altitude per second. It starts at 200 cm. Which equation gives altitude h after t seconds?

- ☐ A. $h = -5t + 200$
- ☐ B. $h = 5t + 200$
- ☐ C. $h = -5t - 200$
- ☐ D. $h = 200t - 5$



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& answers

- 1) Which of the following is the BEST description of what a small residual means?
- ☐ A. The data point is far from the trend line
- ☐ B. The data point is very close to the trend line
- ☐ C. The slope of the line is steep
- ☐ D. There is no correlation in the data
- 2) Triangle X is similar to Triangle Y . In Triangle X , one angle measures 60° . What is the measure of the corresponding angle in Triangle Y ?
- ☐ A. 30°
- ☐ B. 60°
- ☐ C. 120°
- ☐ D. Cannot be determined
- 3) If $g(x) = 5x - 3$ and $g(x) = 12$, what is x ?
- ☐ A. 3
- ☐ B. 2
- ☐ C. 4
- ☐ D. 15



4)

The highlighted interval contains many irrational numbers between 1 and 4. Should 2 be classified as irrational?

- ☐ A. Yes, because 2 is plotted between 1 and 4
- ☐ B. It cannot be determined
- ☐ C. Yes, because $2 = \sqrt{4}$
- ☐ D. No, because 2 is rational, not irrational



5) Between which integers does $\sqrt{99}$ lie?

☐ A. 8 and 9

☐ C. 10 and 11

☐ B. 7 and 8

☐ D. 9 and 10

6) Which is the best estimate of $\sqrt{7}$?

☐ A. 2.1

☐ C. 3.5

☐ B. 7.0

☐ D. 2.6

7) Two hikers start from the same point, walking in opposite directions. One walks at 4 mph, the other at 5 mph. After how many hours are they 27 miles apart?

8) A computer hard drive has a storage capacity of 1.5×10^{12} bytes. How many times larger is this than a USB stick with capacity 1.5×10^{10} bytes?

☐ A. 200 times

☐ C. 10,000 times

☐ B. 1,000 times

☐ D. 100 times

9) Convert $0.\overline{7}$ to a fraction. Which step is incorrect?

☐ A. Let $x = 0.\overline{7}$.

☐ C. $10x - x = 7.\overline{7} - 0.\overline{7} = 7$ is wrong; should be 0.7.

☐ B. $10x = 7.\overline{7}$.

☐ D. $9x = 7$, so $x = \frac{7}{9}$.



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

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

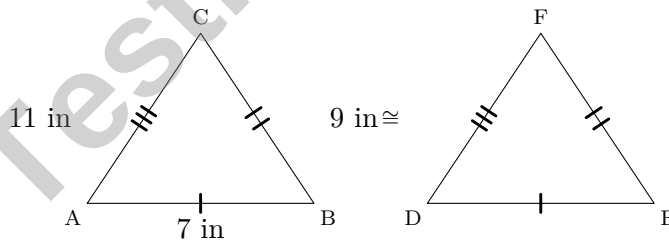
- ☐ A. 7
 ☐ C. 11
☐ B. 9
 ☐ D. 5

- 2) Function through $(1, 2)$ and $(4, 14)$. y -intercept?

- 3) Expand $(x - 7)^2$.

- ☐ A. $x^2 - 49$
☐ C. $x^2 - 14x + 49$
☐ B. $x^2 + 14x + 49$
☐ D. $x^2 - 7x + 49$

- 4) Triangle ABC is congruent to triangle DEF. In triangle ABC: $AB = 7$ in, $BC = 9$ in, $AC = 11$ in. In triangle DEF, which side corresponds to side AC?



- ☐ A. Side DE
☐ D. Cannot be determined from the diagram
☐ B. Side EF
☐ C. Side DF



5) A line has slope -2 . Which pair of points could lie on this line?

☐ A. $(1, 3)$ and $(2, 5)$

☐ C. $(1, 1)$ and $(3, 1)$

☐ B. $(0, 4)$ and $(2, 0)$

☐ D. $(2, 5)$ and $(3, 4)$

6) A water tank contains saltwater at 2% concentration. To reduce the concentration to 1%, how much pure water must be added to 100 liters of the 2% solution?

☐ A. 50 L

☐ C. 100 L

☐ B. 75 L

☐ D. 150 L

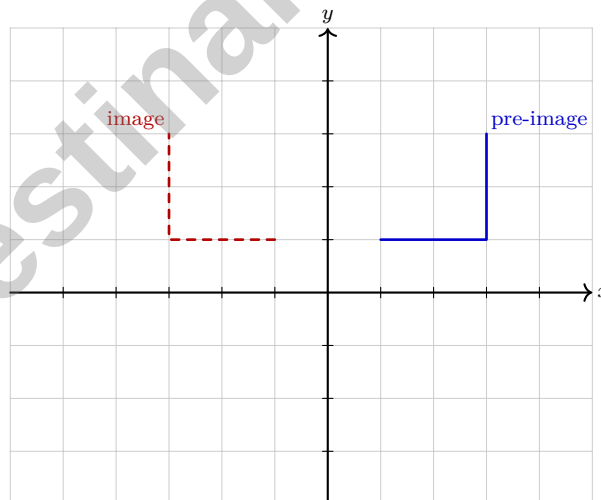
7) Which statement about the graph of a function is true?

☐ A. A function can cross the y -axis twice

☐ C. A function can have multiple x -intercepts but only one y -intercept

☐ B. A function must cross the x -axis exactly once

☐ D. A function must cross both axes exactly once



8)

The segment (blue pre-image) is transformed to the red image. Which transformation is applied?

☐ A. Reflection across the y -axis

☐ C. Translation left 2

☐ B. Rotation 180°

☐ D. Reflection across $y = x$



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& answers

Florida FAST 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 Florida FAST practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (MA.8.NSO.1.7) $7^2 = 49$ and $8^2 = 64$, so $\sqrt{50}$ is a little more than 7. Since $\sqrt{50} \approx 7.07$, it is closest to 7.1.
- 2) **Choice B is correct.** (MA.8.GR.2.3) $SA = 2(6 \times 4 + 6 \times 3 + 4 \times 3) = 2(24 + 18 + 12) = 2(54) = 108 \text{ cm}^2$.
- 3) **Choice B is correct.** (MA.8.DP.1.3) Residual = actual – predicted = $35 - 32 = 3$. The model underestimated by 3 points.
- 4) **Choice A is correct.** (MA.8.AR.3.1) For $y = 2x$: at $x = 1$, $y = 2(1) = 2$. Only choice A gives the correct point.
- 5) **Choice A is correct.** (MA.8.AR.2.1) Subtract 8 from both sides: $2x = 12$. Divide by 2: $x = 6$. Check: $2(6) + 8 = 12 + 8 = 20$ ✓.
- 6) **Choice D is correct.** (MA.8.AR.4.2) The second equation is exactly 2 times the first: $4x - 2y = 10$ is $2(2x - y = 5)$. They represent the same line, so there are infinitely many solutions.
- 7) **Choice C is correct.** (MA.8.AR.4.2) Strict inequality ($<$) means a DASHED boundary line. Because y is LESS than the expression, shade BELOW the line.
- 8) **Choice D is correct.** (MA.8.F.1.1) Each country has exactly one capital city. The other relations can assign more than one output to a single input.
- 9) **Choice C is correct.** (MA.8.F.1.2) Slope of h : -2 . From k 's table: $(5 - 7)/(1 - 0) = -2$. Both have slope -2 .
- 10) **Choice B is correct.** (MA.8.F.1.2) The first differences are 3, 5, 7, which are not constant. When first differences vary, the function is nonlinear.
- 11) **Choice A is correct.** (MA.8.AR.3.5) Initial altitude is 200 cm (intercept). Altitude decreases by 5 cm per second (negative slope). Equation: $h = -5t + 200$.
- 12) **Choice A is correct.** (MA.8.F.1.3) From $x = -1$ to $x = 1$: the function is constant at $f(x) = 2$ (neither increasing nor decreasing). From $x = 1$ to $x = 3$: the function increases from 2 to 4. From $x = 3$ onward: the function decreases.
- 13) **Choice B is correct.** (MA.8.GR.2.3) $D' = (8, 10)$. Distance: $\sqrt{8^2 + 10^2} = \sqrt{64 + 100} = \sqrt{164} = 2\sqrt{41}$.
- 14) **Choice A is correct.** (MA.8.GR.1.5) Exterior angle = sum of remote interior angles: $117 = 68 + x$, so $x = 49^\circ$.
- 15) **Choice A is correct.** (MA.8.GR.1.2) $d = \sqrt{(11 - 3)^2 + (16 - 1)^2} = \sqrt{8^2 + 15^2} = \sqrt{64 + 225} = \sqrt{289} = 17$ (hundred km).
- 16) **The correct answer is \$1,800.** (MA.8.AR.3.5) Interest: $I = 1500 \times 0.04 \times 10 = \600 . Total: $1500 + 600 = \$1,800$.
- 17) **Choice B is correct.** (MA.8.GR.1.4) Corresponding angles are congruent when a transversal cuts parallel lines. So $v = 68^\circ$.
- 18) **Choice B is correct.** (MA.8.GR.1.1) 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.)
- 19) **Choice A is correct.** (MA.8.GR.1.6) The sum for a regular octagon is $(8 - 2) \times 180 = 1080^\circ$. Each angle is $\frac{1080}{8} = 135^\circ$.
- 20) **Choice C is correct.** (MA.8.DP.1.1) Most students show: more TV $\rightarrow$ lower GPA. This student breaks that pattern with high TV but also high GPA, making this point an outlier that deviates from the trend.
- 21) **The correct answer is A, C.** (MA.8.DP.2.1) 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: $P(\text{not heads}) = \frac{1}{2}$.
- 22) **Choice D is correct.** (MA.8.DP.1.2) The marginal frequency for middle school is the row total: $55 + 70 = 125$.
- 23) **Choice C is correct.** (MA.8.GR.1.2) Option C describes the common error of confusing range with MAD. Option B correctly uses absolute value, and options A and D do not describe the range error.
- 24) **Choice A is correct.** (MA.8.AR.1.2) Find two numbers that multiply to -20 and add to -1 : -5 and 4 . Check: $-5 \cdot 4 = -20$ and $-5 + 4 = -1$.
- 25) **Choice B is correct.** (MA.8.GR.2.1) Both reflection and rotation are rigid motions that preserve area. A sequence of rigid motions preserves the original area, so the final triangle has area 35 sq cm .
- 26) **Choice B is correct.** (MA.8.GR.1.1) Error analysis: Verify using the converse. $16 + 25 = 41$ but $36 \neq 41$, so this is NOT a right triangle.
- 27) **Choice A is correct.** (MA.8.AR.3.2) The line passes through $(0, 50)$ and $(8, 10)$. Slope = $\frac{10 - 50}{8 - 0} = \frac{-40}{8} = -5 \text{ mg/h}$. The concentration decreases at a rate of 5 mg per hour.



The Power of Showing Work

Hi, Organized Solver!

◇ You practiced Grade 8 skills that often require more than one step. That means your written work matters. ◇

★ **Remember this:** Showing work is not extra. It is how you track your thinking, find errors, and prove that your answer did not happen by luck. You practiced across 10 full Grade 8 practice tests, and that repeated effort matters. ★

Organized Work Habits

- **One Line Per Step:** Keep the path readable.
- **Box the Answer:** Make the final result easy to find.
- **Use Labels:** Tell what each value represents.
- **Check the Path:** Follow your steps backward if needed.

Grade 8 test-day tip: When a problem has several steps, write less on each line. Space makes checking easier.

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

Jay Daie

Your Organized-Work Coach

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.



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Develop strong math skills and problem solving abilities.



Improve Understanding

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Learn proven strategies to approach every question with confidence.



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Apply your knowledge and achieve your best score!

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