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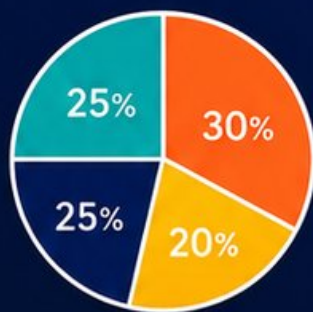
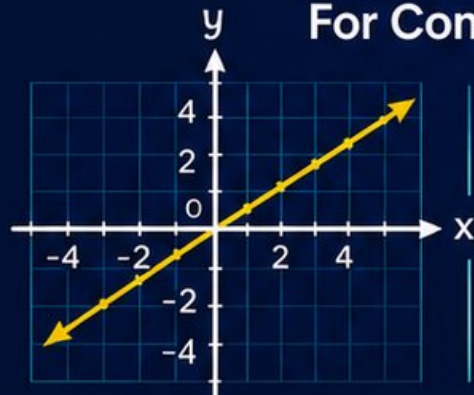
Florida FAST

GRADE 8

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

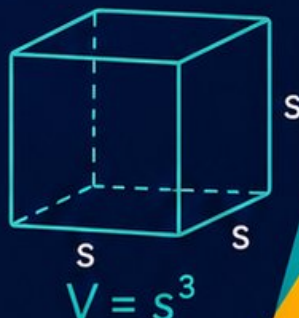


$$y = mx + b$$

$$2x - 3y = 6$$

$$\sqrt{x^2 + y^2}$$

$$A = bh$$



4 PRINTED TESTS



2 ONLINE TESTS

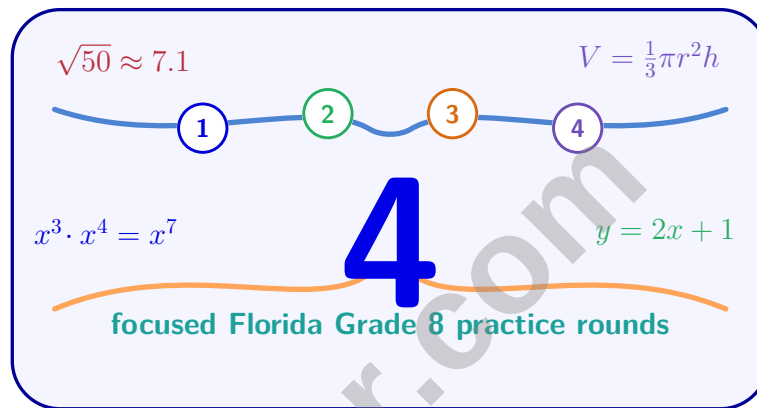


Use these **two additional online practice tests** for extra review after the printed tests in this book.



4 Florida FAST Grade 8 Math Practice Tests

Standards-Based FAST Practice for Confident Grade 8 Review



Four complete 40-question Grade 8 FAST practice rounds with real numbers, exponents, scientific notation, equations, functions, transformations, 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!

Four focused rounds for sharper FAST math thinking

This book gives you four full Grade 8 FAST math practice tests. Each round is built to help you recognize structure, reason with real numbers and exponents, analyze linear relationships, connect equations with graphs, and explain your thinking with care.

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 four-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 an exponent rule, equation, graph, transformation, diagram, 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.

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?

Four FAST tests, 160 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Real numbers, exponents, scientific notation, equations, and careful reading.
Tests 3–4	Functions, systems, transformations, geometry, data analysis, and multi-step problem solving.
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.



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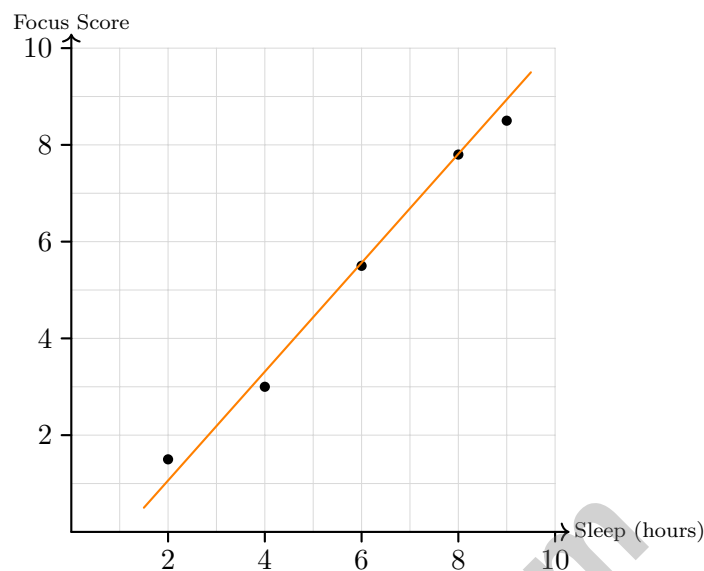
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- 1) Two triangles are congruent. If one triangle has angles of $40^\circ, 60^\circ, 80^\circ$, what are the angles of the other triangle?
- ☐ A. $40^\circ, 60^\circ, 90^\circ$ ☐ C. $80^\circ, 60^\circ, 40^\circ$ (different order)
- ☐ B. $40^\circ, 60^\circ, 80^\circ$ ☐ D. $50^\circ, 60^\circ, 70^\circ$
- 2) A student solves: "A jar has pennies and quarters totaling \$5.00 with 40 coins. How many quarters are there?" The student correctly sets up $p + q = 40$ (coins) and $0.01p + 0.25q = 5.00$ (dollars) and solves to get $q \approx 19.17$. Which statement best describes the issue?
- ☐ A. The student should have used cents: $p + 25q = 500$ instead.
- ☐ B. The student should use elimination instead of substitution.
- ☐ C. The answer must be a whole number, so the problem statement likely has a typo.
- ☐ D. The system is correct, and 19.17 quarters is a valid final answer.
- 3) A teacher selects 2 students from a class of 6 to be line leaders. The first student is the main leader and the second is the assistant. In how many ways can this be done?
- ☐ A. $6 + 5 = 11$ ☐ C. $\binom{6}{2} = 15$
- ☐ B. $6 \times 5 = 30$ ☐ D. $6^2 = 36$



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4)

Based on the trend line, if a student sleeps 7 hours, what is the predicted focus score?

☐ A. Approximately 5

☐ C. Approximately 7

☐ B. Approximately 6

☐ D. Approximately 8

5) A cube is dilated by a scale factor of 2. If the original cube has volume 27 cm^3 , what is the volume of the dilated cube?

☐ A. 54 cm^3
☐ C. 216 cm^3
☐ B. 108 cm^3
☐ D. 81 cm^3

6) The function $f(x)$ represents postage cost based on weight in ounces: $f(x) =$

$$\begin{cases} 0.55 & \text{if } 0 < x \leq 1 \\ 0.75 & \text{if } 1 < x \leq 2 \\ 0.95 & \text{if } 2 < x \leq 3 \end{cases}$$

What is $f(1.5)$?

☐ A. \$0.55

☐ C. \$0.95

☐ B. \$0.75

☐ D. \$1.50

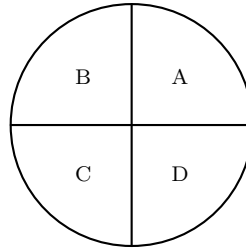

7) Which number lies between 3 and 4?

☐ A. $\sqrt{8}$

☐ B. $\sqrt{25}$

☐ C. $\sqrt{20}$

☐ D. $\sqrt{13}$



8)

The spinner above is divided into 4 equal sections labeled A, B, C, and D. What is the probability of landing on section A?

☐ A. $\frac{1}{4}$

☐ B. $\frac{1}{8}$

☐ C. $\frac{3}{4}$

☐ D. $\frac{1}{2}$

9) Points $(-1, 5)$ and $(2, 14)$ lie on a line. Find the slope.

10) Is $\sqrt{17}$ closer to 4 or closer to 5?

☐ A. Both equally close☐ B. Closer to 5☐ C. Closer to 4☐ D. Cannot determine

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1) Convert $0.1\overline{35}$ to a fraction in simplest form.

☐ A. $\frac{1}{135}$

☐ B. $\frac{135}{1000}$

☐ C. $\frac{135}{999}$

☐ D. $\frac{134}{990} = \frac{67}{495}$

2) Multiply: $(x + 3)(x - 5)$

☐ A. $x^2 - 15$

☐ B. $x^2 + 3x - 5$

☐ C. $x^2 - 2x - 15$

☐ D. $x^2 + 8x - 15$

3) A cell phone plan costs \$20 per month plus \$0.10 per text message. If cost is graphed against number of texts sent (x-axis texts, y-axis cost in \$), what is the slope?

☐ A. \$20 per text

☐ B. \$20.10 per text

☐ C. 20 texts per dollar

☐ D. \$0.10 per text

4) Two rectangles are considered separately. The first rectangle is x cm long and 5 cm wide. The second rectangle is y cm long and 5 cm wide. The sum of their perimeters is 56 cm, and the difference in their lengths is 2 cm. If $x > y$, what is x ?

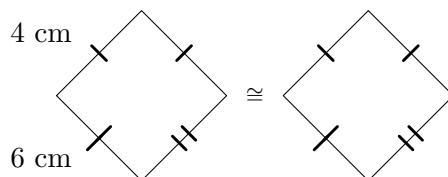
☐ A. 8 cm

☐ B. 12 cm

☐ C. 10 cm

☐ D. 14 cm

5) Two congruent kites are shown with matching tick marks. In Kite 1, two adjacent sides each measure 4 cm, and the other two adjacent sides each measure 6 cm. What are the side lengths of Kite 2?



☐ A. 2 cm, 2 cm, 3 cm, 3 cm

☐ B. 4 cm, 4 cm, 6 cm, 6 cm

☐ C. 8 cm, 8 cm, 12 cm, 12 cm

☐ D. 5 cm, 5 cm, 7 cm, 7 cm



- 6) Two lines intersect. One angle is 82° . What is the measure of an adjacent angle?

- 7) Four scatter plots are shown with different correlation patterns. Which plot would be most useful for predicting the value of one variable given the other?

- ☐ A. Weak positive correlation with many outliers
- ☐ B. Strong positive correlation with minimal scatter
- ☐ C. No correlation with random scatter
- ☐ D. Perfect nonlinear association

- 8) A two-way table categorizes 150 households by income level and internet access:

	Has Internet	No Internet	Total
Low Income	40	50	90
High Income	55	5	60
Total	95	55	150

Among high-income households, what is the relative frequency of those without internet, as a decimal?

- ☐ A. 0.033
- ☐ B. 0.083
- ☐ C. 0.367
- ☐ D. 0.917

- 9)

Test Scores	88	92	90	86	94
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Five students scored as shown. The mean is 90. Calculate the MAD.

- ☐ A. 2
- ☐ B. 3
- ☐ C. 2.4
- ☐ D. 4

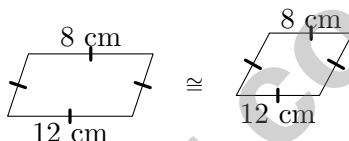


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- 1) An area model for $(x + 6)(x - 2)$ shows four rectangular regions. What is their total area?

	x	6
x	x^2	$6x$
-2	$-2x$	-12

- ☐ A. $x^2 + 4x - 12$
☐ C. $x^2 + 8x - 12$
☐ B. $x^2 - 12$
☐ D. $x^2 + 6x - 2$
- 2) Two congruent trapezoids are shown. One trapezoid has parallel sides of 8 cm and 12 cm. What are the parallel sides of the congruent trapezoid?



- ☐ A. 4 cm and 6 cm
 ☐ C. 16 cm and 24 cm
☐ B. 8 cm and 12 cm
 ☐ D. Cannot be determined
- 3) Three points lie on the same line: $(1, 5)$, $(3, 9)$, and $(x, 13)$. What is the value of x ?
- ☐ A. 4
 ☐ C. 6
☐ B. 7
 ☐ D. 5
- 4) Which system best models: "The sum of two numbers is 20. Their difference is 4"?
- ☐ A. $x + y = 20$; $x - y = 4$
☐ C. $x \cdot y = 20$; $x/y = 4$
☐ B. $x + y = 20$; $x + y = 4$
☐ D. $x = 20$; $y = 4$

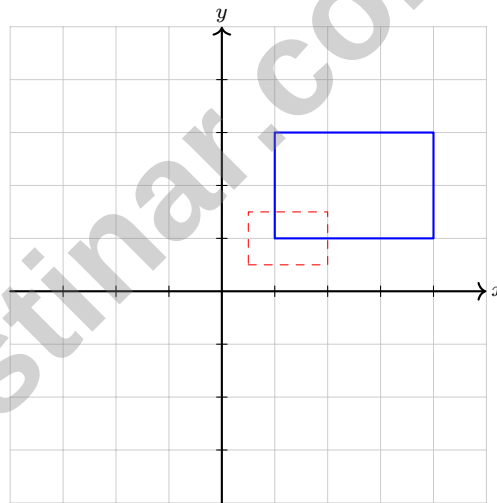


- 5) If a linear function has a constant rate of change of 3, and passes through $(0, 5)$, write the equation in the form $y = mx + b$.

- 6) The temperature $T(h)$ in degrees Celsius at height h km above sea level is $T(h) = 25 - 6h$. What is $T(2)$?

- ☐ A. 37
☐ B. 13

- ☐ C. 19
☐ D. 50



7)

The blue rectangle is dilated to form the red rectangle. What is the scale factor?

- ☐ A. $\frac{1}{2}$
☐ B. 2

- ☐ C. $\frac{1}{3}$
☐ D. 3



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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 B is correct.** (MA.8.GR.2.1) Congruent triangles have equal corresponding angles. Regardless of which triangle is labeled first or second, the three angles must be identical: $40^\circ, 60^\circ, 80^\circ$. The order of listing doesn't matter; the angles are the same.
- 2) **Choice C is correct.** (MA.8.AR.4.3) Setting up correctly: $p + q = 40$ and $0.01p + 0.25q = 5.00$. From the first: $p = 40 - q$. Substituting: $0.01(40 - q) + 0.25q = 5.00$, so $0.40 - 0.01q + 0.25q = 5.00$, giving $0.24q = 4.60$ and $q \approx 19.17$. Since the number of coins must be an integer, the problem's numbers are inconsistent.
- 3) **Choice B is correct.** (MA.8.AR.2.1) Choose a main leader (6 choices) then an assistant from the remaining 5 students: $6 \times 5 = 30$.
- 4) **Choice C is correct.** (MA.8.DP.1.3) Reading from the trend line at $x = 7$, the corresponding y -value is just under 7, so the best estimate is approximately 7.
- 5) **Choice C is correct.** (MA.8.GR.2.2) Volume scales by the cube of the scale factor: $27 \times 2^3 = 27 \times 8 = 216 \text{ cm}^3$.
- 6) **Choice B is correct.** (MA.8.F.1.1) Since $1 < 1.5 \leq 2$, use the second rule: $f(1.5) = 0.75$. Cost is \$0.75.
- 7) **Choice D is correct.** (MA.8.NSO.1.1) Since $3^2 = 9$ and $4^2 = 16$, any square root between $\sqrt{9}$ and $\sqrt{16}$ lies between 3 and 4. Because 13 is between 9 and 16, $\sqrt{13}$ is between 3 and 4. Also, $\sqrt{8} \approx 2.83$, $\sqrt{13} \approx 3.61$, $\sqrt{20} \approx 4.47$, and $\sqrt{25} = 5$, so only $\sqrt{13}$ is in the interval from 3 to 4.
- 8) **Choice A is correct.** (MA.8.DP.2.1) Each section is equal, so each has probability $\frac{1}{4}$.
- 9) **The correct answer is 3.** (MA.8.AR.3.2) Slope = $\frac{14 - 5}{2 - (-1)} = \frac{9}{3} = 3$.
- 10) **Choice C is correct.** (MA.8.NSO.1.2) The midpoint between 4 and 5 is 4.5. Check: $(4.5)^2 = 20.25$. Since $17 < 20.25$, we have $\sqrt{17} < 4.5$. Therefore $\sqrt{17}$ is closer to 4.
- 11) **Choice D is correct.** (MA.8.NSO.1.2) $\sqrt{5} \times \sqrt{20} = \sqrt{100} = 10$ exactly. This is a perfect pair.
- 12) **Choice D is correct.** (MA.8.NSO.1.4) $10^0 = 1$, so $3.9 \times 10^0 = 3.9 \times 1 = 3.9$.
- 13) **Choice D is correct.** (MA.8.NSO.1.1) Let $x = 0.\overline{111}$. Then $1000x = 111.\overline{111}$. Subtracting: $999x = 111$, so $x = \frac{111}{999} = \frac{1}{9}$.
- 14) **Choice B is correct.** (MA.8.GR.2.3) Cube SA = 24 m^2 , rectangular prism SA = 40 m^2 . Subtract the two shared faces: $24 + 40 - 2(4) = 56 \text{ m}^2$.
- 15) **Choice C is correct.** (MA.8.AR.3.5) The slope of the given line is 2. The perpendicular slope is $-\frac{1}{2}$ (negative reciprocal).
- 16) **Choice A is correct.** (MA.8.AR.2.1) Multiply both sides by 5: $3x - 2 = 10$. Add 2: $3x = 12$. Divide by 3: $x = 4$.
- 17) **Choice A is correct.** (MA.8.AR.2.2) Subtract 2: $3x \geq -6$. Divide by 3: $x \geq -2$.
- 18) **Choice C is correct.** (MA.8.AR.4.2) SOLID boundary (includes line) + BELOW shading = $\leq$. Verify: $(0, 0)$ in shaded region: $0 \leq -\frac{1}{2}(0) + 3 = 3$ ✓ TRUE. Distractor A shows algebra error (forgot flip); B shows double error; D shows inverted shading.
- 19) **The correct answer is A,D.** (MA.8.AR.1.2) Choice A: $x^2 - 25 = (x + 5)(x - 5)$ includes $(x - 5)$. Choice D: $x^2 - 7x + 10 = (x - 5)(x - 2)$ includes $(x - 5)$. Choice B is $x^2 + 10x + 25 = (x + 5)^2$, which does not include $(x - 5)$. Choice C: $x^2 + 2x - 15 = (x + 5)(x - 3)$ does not include $(x - 5)$. Choice E: $x^2 + 3x - 10 = (x + 5)(x - 2)$ does not include $(x - 5)$.
- 20) **Choice A is correct.** (MA.8.GR.2.3) Reflection across the y -axis uses the rule $(x, y) \rightarrow (-x, y)$. Only the sign of x changes; the y -coordinate stays the same. (Coordinate swapping is reflection across $y = x$, not the y -axis.)
- 21) **Choice C is correct.** (MA.8.GR.1.5) $V = \frac{4}{3}\pi r^3 = \frac{4}{3} \times 3.14 \times 512 = 2143.57 \text{ in}^3$.
- 22) **Choice C is correct.** (MA.8.DP.1.3) The y -intercept (15) is the cost when $u = 0$, representing fixed storage costs.
- 23) **Choice D is correct.** (MA.8.AR.3.5) Cash option: $\$2,000 + \$200 = \$2,200$. Investment option: $I = 2000 \times 0.08 \times 1 = \160 ; total = $\$2,160$. Receiving cash now is better.
- 24) **The correct answer is Plot A.** (MA.8.DP.1.1) Strength of correlation is judged by how closely points cluster around the trend line. Tight clustering (Plot A) indicates stronger correlation; wide scatter (Plot B) indicates weaker correlation.



Hi, Brave Learner!

◇ No one gets stronger by only doing easy problems. The questions that slowed you down were part of the training. This carefully paced book gave you four steady Grade 8 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Mistakes are not proof that you cannot do math. They are directions. They show what to review, what to ask about, and what to practice next. ★

How to Use Mistakes

- **Name It:** Was it reading, setup, arithmetic, or checking?
- **Fix It:** Correct the work while the question is fresh.
- **Repeat It:** Try one similar problem soon.
- **Remember It:** Write the lesson in your own words.

Grade 8 test-day tip: Treat every corrected error as a point you are preparing to earn next time.

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

Jay Daie

Your Brave-Learning Coach

PRACTICE TODAY, ACHIEVE TOMORROW!

Give your child the confidence and skills they need with **4 full-length Grade 8 Math** practice tests that reflect real test formats and cover all key math standards. Perfect for building skills, strengthening problem-solving abilities, and achieving success on test day!

4



WHAT'S INSIDE?



Standards-Aligned Practice

Questions designed to cover essential Grade 8 math standards.



Variety of Question Types

Multiple-choice, short answer, and more to build well-rounded skills.



Real-World Applications

Engaging problems that connect math to everyday life.



Step-by-Step Progress

Track improvement and build confidence with every test.



COVERS ALL ESSENTIAL TOPICS

- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Ratios & Proportional Relationships
- ✓ Linear Equations
- ✓ Functions
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Statistics & Probability
- ✓ Pythagorean Theorem
- ✓ Volume & Surface Area
- ✓ Transformations
- ✓ Inequalities
- ✓ Data Analysis & Graphing
- ✓ And More!



4 PRINTED TESTS

+



2 ONLINE TESTS



Use these **two additional online practice tests** for extra review after the printed tests in this book.