

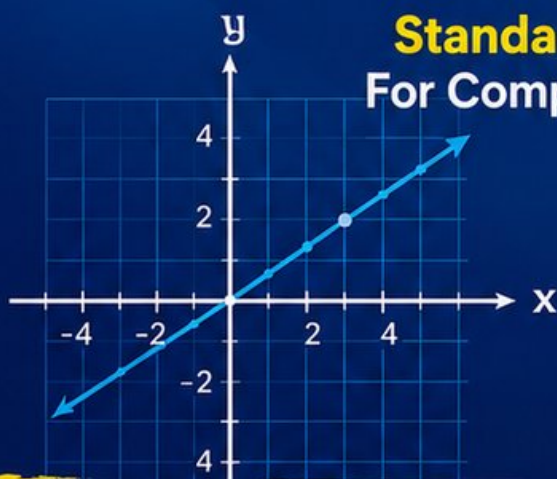
9

California
CAASPP

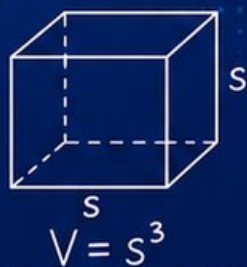
Grade 8

MATH

PRACTICE TESTS

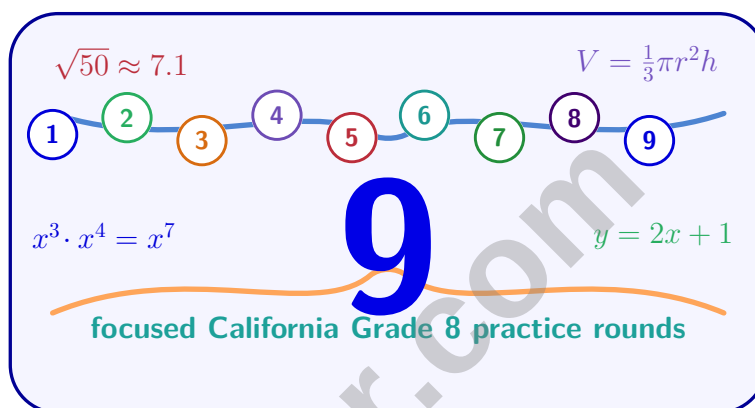
Standards Aligned Problem Solving
For Comprehensive Assessment Programs

$$2x + 3y = 12$$
$$y = mx + b$$

9 PRINTED
TESTS2 ONLINE
TESTSUse these **two additional online practice tests** for extra review after the printed tests in this book.

9 California CAASPP Grade 8 Math Practice Tests

Standards-Based California Practice with Review, Answer Keys, and Explanations



Nine complete 40-question Grade 8 CAASPP 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



Copyright ©

Testinar Inc



Published by Testinar Inc

Testinar.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



Copyright ©

Welcome, California Grade 8 Problem Solver!

Nine focused rounds for sharper CAASPP math thinking

This book gives you nine full Grade 8 CAASPP 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 California 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 nine-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.

California 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?

Nine CAASPP tests, 360 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Real and irrational numbers, integer exponents, scientific notation, equations, and careful reading.
Tests 4–6	Slope, systems of equations, functions, inequalities, transformations, congruence, and similarity.
Tests 7–9	Pythagorean reasoning, volume, data analysis, linear models, probability, mixed review, and stamina.
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.



Scan me!

For more practice
& answers

+ -

.....

3

.....

× ÷

Testinar.com



Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	30
★ Practice Test 3	_____	46
★ Practice Test 4	_____	62
★ Practice Test 5	_____	77
★ Practice Test 6	_____	92
★ Practice Test 7	_____	107
★ Practice Test 8	_____	124
★ Practice Test 9	_____	139
Practice Test Answer Keys	_____	156
Practice Test Answers and Explanations	_____	162

1) f passes through $(2, 5)$ and $(4, 1)$. $g(x) = -x + 8$. Which has a more negative slope?

☐ A. $f(x)$

☐ C. Both equal.

☐ B. $g(x)$

☐ D. Not comparable.

2) A quadrilateral is rotated 270° clockwise about the origin. This is equivalent to a counterclockwise rotation of how many degrees?

☐ A. 90°

☐ C. 270°

☐ B. 180°

☐ D. 360°

3) Which statement is FALSE?

☐ A. $\pi \approx 3.14$

☐ C. $\sqrt{50} \approx 5.0$

☐ B. $\sqrt{2} \approx 1.4$

☐ D. $\sqrt{15} \approx 3.9$

4) A virus has diameter 1.2×10^{-7} m. Bacteria has diameter 8×10^{-6} m. How many times larger is the bacterium than the virus?

5) A gift of \$2,000 is offered in two ways: receive \$200 cash now or invest it at 8% simple interest for 1 year. Which choice results in more money after 1 year?

☐ A. Cannot determine without more information

☐ C. Both result in the same amount

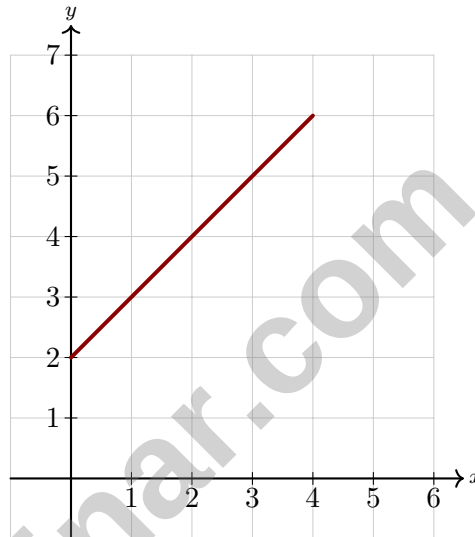
☐ B. Invest at 8% for 1 year; total will be \$2,160

☐ D. Receive \$200 cash now; total will be \$2,200



6) A student writes: $\frac{x^8}{x^2} = x^4$. What mistake did the student make?

- ☐ A. Added the exponents instead of subtracting.
- ☐ B. Multiplied the exponents instead of subtracting.
- ☐ C. Divided the exponents instead of subtracting.
- ☐ D. The student is correct.



7)

What is the y -intercept of the line shown?

- ☐ A. 1
- ☐ B. 4
- ☐ C. 3
- ☐ D. 2

8) Estimate $\sqrt{50}$ to the nearest tenth and explain how you found your estimate.



Scan me!
For more practice
& answers

- 9) Convert $0.\overline{2}$ to a fraction. Show the algebraic steps (let $x = \dots$, multiply, subtract, solve).

- 10) Identify the system with no solution.

- ☐ A. $y = \frac{1}{2}x + 1$ and $y = \frac{1}{2}x - 3$
☐ C. $y = \frac{1}{2}x + 1$ and $x - 2y = -2$
☐ B. $y = \frac{1}{2}x + 1$ and $y = -2x + 1$
☐ D. $y = \frac{1}{2}x + 1$ and $2y = x + 2$

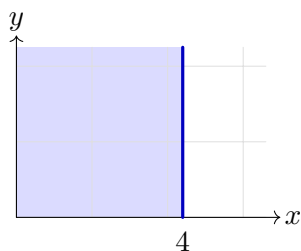
- 11) Which inequality is equivalent to $-\frac{x}{4} < 2$?

- ☐ A. $x < -8$
☐ C. $x > -8$
☐ B. $x < 8$
☐ D. $x > 8$

- 12) Factor $x^2 + 5x - 36$.

- ☐ A. $(x + 9)(x - 4)$
☐ C. $(x + 12)(x - 3)$
☐ B. $(x - 9)(x + 4)$
☐ D. $(x + 6)(x - 6)$

- 13) A student sees a graph with a SOLID vertical line at $x = 4$. The left side is shaded. What does this represent?



- ☐ A. $x < 4$
☐ C. $x > 4$
☐ B. $x \leq 4$
☐ D. $x \geq 4$



1.2 34 3434...

$\underbrace{\hspace{1.5cm}}$
 34 repeats

1)

The decimal $1.2\overline{34}$ (where 34 repeats) is:

- | | |
|--|---|
| ☐ A. Irrational | ☐ C. Neither rational nor irrational |
| ☐ B. Equal to π | ☐ D. Rational |

2) A triangular pyramid has an equilateral triangular base with side 6 cm and a pyramid height of 8 cm. The area of an equilateral triangle with side 6 cm is $9\sqrt{3} \text{ cm}^2 \approx 15.59 \text{ cm}^2$. What is the volume?

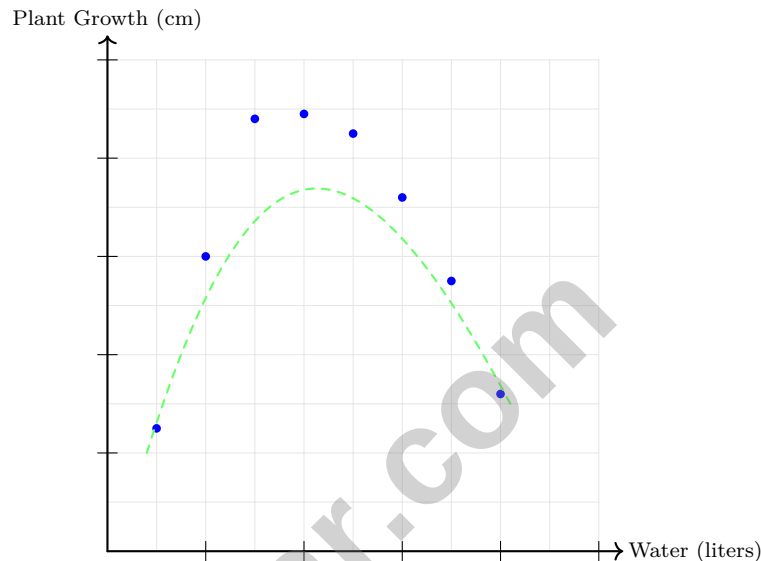
- | | |
|---|---|
| ☐ A. $\approx 37 \text{ cm}^3$ | ☐ C. $\approx 52 \text{ cm}^3$ |
| ☐ B. $\approx 42 \text{ cm}^3$ | ☐ D. $\approx 62 \text{ cm}^3$ |

3) A survey of 200 people on vacation preferences: 130 prefer beach, 70 prefer mountains. Among beach-lovers, 91 are first-time visitors. What fraction of beach-lovers are repeat visitors?

- | | |
|--|--|
| ☐ A. $\frac{39}{200}$ | ☐ C. $\frac{91}{130}$ |
| ☐ B. $\frac{39}{130}$ | ☐ D. $\frac{70}{200}$ |



- 4) A scatter plot shows plant growth (cm) versus amount of water given (liters) over 8 weeks. The first 3 liters produce rapid growth; beyond 3 liters, additional water causes little additional growth, then declining growth past 5 liters (from overwatering). This pattern is best described as:



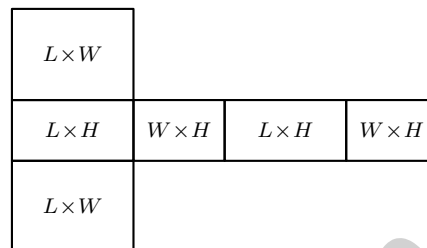
- ☐ A. Negative linear correlation ☐ C. Nonlinear: increasing then decreasing (inverted parabola)
☐ B. Perfect positive correlation ☐ D. No correlation
- 5) Which data scenario would MOST closely match a linear model $y = 0.5x + 15$?
- ☐ A. Bacteria population doubling every hour ☐ C. Height of a ball after it bounces (decreasing bounce heights)
☐ B. Water height in a tank filling at a constant rate ☐ D. Compound interest in a savings account



Scan me!
For more practice
& answers

- 1) Two parallel lines cut by a transversal create 8 angles. If one angle is 67° , which angle measure does NOT appear among the 8 angles?

- ☐ A. 67°
☐ C. 47°
☐ B. 113°
☐ D. Both 67° and 113° appear



- 2) Net of a rectangular prism

A rectangular prism has dimensions 4 cm (L) $\times$ 3 cm (W) $\times$ 2 cm (H). If we unfold it into a net, how many faces does the net show?

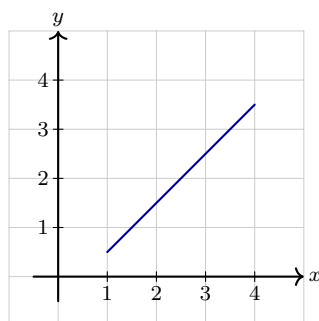
- ☐ A. 3 faces
 ☐ C. 6 faces
☐ B. 4 faces
 ☐ D. 8 faces
- 3) A cylinder has volume 628 m^3 and radius 5 m. Approximately, what is its height?
(Use $\pi \approx 3.14$.)

- ☐ A. 4 m
 ☐ C. 16 m
☐ B. 8 m
 ☐ D. 20 m



Scan me!
For more practice
& answers

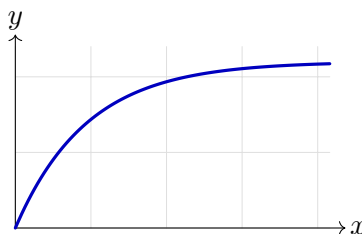
4) Which graph BEST represents a linear function?



- ☐ A. The curved path ☐ C. Only if it starts at origin
☐ B. The straight line shown ☐ D. The slopes of individual segments

5) Solve the system $\begin{cases} x + y = 8 \\ x - y = 2 \end{cases}$ by elimination.

6) Which real-world scenario matches: graph starts at origin, rises steeply, then gradually levels off?



- ☐ A. A plant growing slower and slower as it matures ☐ C. Water flowing out of a tank at constant rate
☐ B. A car accelerating uniformly over time ☐ D. A ball rolling down a ramp with no friction



California CAASPP 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 California CAASPP practice test.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (8.F.2) Slope of f : $(1-5)/(4-2) = -4/2 = -2$. Slope of g : -1 . Comparing: -2 is further left on the number line than -1 , so f with slope -2 is more negative than g with slope -1 .
- 2) **Choice A is correct.** (8.G.1) Clockwise and counterclockwise are opposite directions. 270° clockwise $= 360^\circ - 270^\circ = 90^\circ$ counterclockwise.
- 3) **Choice C is correct.** (8.NS.2) $\sqrt{50} = 5\sqrt{2} \approx 5 \times 1.41 = 7.07$, not 5.0 . All other statements are accurate estimates.
- 4) **The correct answer is 66.67.** (8.EE.3) Divide: $\frac{8 \times 10^{-6}}{1.2 \times 10^{-7}} = \frac{8}{1.2} \times 10^1 = 6.67 \times 10^1 \approx 66.67$.
- 5) **Choice D is correct.** (8.G.7) 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.
- 6) **Choice C is correct.** (8.EE.1) Correct answer: $\frac{x^8}{x^2} = x^{8-2} = x^6$, not x^4 . The student likely divided: $8 \div 2 = 4$.
- 7) **Choice D is correct.** (8.EE.6) The y -intercept is where the line crosses the y -axis, which occurs at $(0, 2)$.
- 8) **The correct answer is 7.1.** (8.NS.1) Since $7^2 = 49$ and $7.1^2 = 50.41$, we have $\sqrt{50}$ between 7.0 and 7.1 , closer to 7.1 . More precisely, $7.07^2 \approx 49.98 \approx 50$. To the nearest tenth, $\sqrt{50} \approx 7.1$.
- 9) **The correct answer is $\frac{2}{9}$.** (8.G.1) Set $x = 0.2$, so $10x = 2.2$. Subtracting: $10x - x = 2$, giving $9x = 2$ and $x = \frac{2}{9}$.
- 10) **Choice A is correct.** (8.EE.8) These lines have the same slope ($\frac{1}{2}$) but different y -intercepts (1 and -3), making them parallel with no intersection.
- 11) **Choice C is correct.** (8.EE.7) Multiply by -4 (FLIP): $x > -8$.
- 12) **Choice A is correct.** (8.EE.7) Find two numbers that multiply to -36 and add to 5 : 9 and -4 . Verify: $9 \cdot (-4) = -36$ and $9 - 4 = 5$.
- 13) **Choice B is correct.** (8.G.8) SOLID line means the boundary is INCLUDED ($\leq$ or $\geq$). Shading to the LEFT means x values are at most 4 , so $x \leq 4$.
- 14) **Choice C is correct.** (8.F.1) The definition of a function only requires that each input has exactly one output. Different inputs can produce different outputs, and some functions are constant while others are not.
- 15) **Choice A is correct.** (8.F.3) The y -values increase by 3 each time x increases by 1 : $-2 - (-5) = 3$, $1 - (-2) = 3$, and $4 - 1 = 3$. Constant first differences show the table represents a linear function.
- 16) **Choice B is correct.** (8.F.5) A flat section means the function is constant, so the temperature does not change. This occurs from noon to 6pm.
- 17) **Choice C is correct.** (8.G.3) Under 180° rotation, $(x, y) \rightarrow (-x, -y)$: $(1, 1) \rightarrow (-1, -1)$, $(3, 1) \rightarrow (-3, -1)$, $(2, 3) \rightarrow (-2, -3)$. This matches the red triangle.
- 18) **Choice A is correct.** (8.G.6, 8.G.7) Using $a^2 + b^2 = c^2$: $20^2 + 21^2 = 400 + 441 = 841$, so $c = 29$ (the 20-21-29 triple).
- 19) **The correct answer is A,D.** (8.SP.4) Statement A is correct because $150 \div 300 = 0.50$. Statement D is correct because $150 \div 500 = 0.30$. Statement B is false as written because $100 \div 500 = 0.20$, not 0.50 . Statements C and E are false.
- 20) **Choice D is correct.** (8.EE.2) $6 \times 6 \times 6 = 216$, so $\sqrt[3]{216} = 6$.
- 21) **Choice C is correct.** (8.EE.4) Multiply coefficients: $4.8 \times 1.25 = 6$. Add exponents: $10^{-2+2} = 10^0 = 1$. Result: $6 \times 10^0 = 6 \times 1 = 6$.
- 22) **Choice D is correct.** (8.EE.5) Unit rate $k = \frac{45}{3} = 15$ dollars per hour.
- 23) **Choice B is correct.** (8.F.4) Current value $\$18,000$ (intercept). Depreciates (decreases) by $\$2000$ per year (negative slope). Equation: $V = -2000t + 18000$.
- 24) **Choice D is correct.** (8.G.2) Reflection is a rigid motion that preserves side lengths. The reflected rhombus has sides of 8 cm.
- 25) **Choice D is correct.** (8.G.5) Corresponding angles are equal: $5x - 10 = 3x + 50$, so $2x = 60$ and $x = 30$.
- 26) **Choice A is correct.** (8.G.8) $d = \sqrt{(5-2)^2 + (7-3)^2} = \sqrt{3^2 + 4^2} = \sqrt{9+16} = \sqrt{25} = 5$ units.
- 27) **Choice D is correct.** (8.G.5) Using $\frac{(n-2) \times 180}{n} = 120$: $(n-2) \times 180 = 120n \Rightarrow 180n - 360 = 120n \Rightarrow 60n = 360 \Rightarrow n = 6$ (hexagon).



Hi, Smart Reviewer!

◇ The best learning often happens after the test, when you look back and notice what worked and what needs attention. This high-stamina book gave you nine substantial Grade 8 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** You can use these practice tests as a map. The questions you solved quickly show strengths; the questions you missed show where to train next. ★

Review Routine

- **Sort:** Group mistakes by skill.
- **Reread:** Check whether the question was misunderstood.
- **Resolve:** Do the problem again without looking.
- **Record:** Write the lesson in one sentence.

Grade 8 test-day tip: Review in short focused sessions. Ten careful minutes can be more useful than an hour of rushing.

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

Jay Daie

Your Review Coach

CONFIDENCE TODAY, SUCCESS TOMORROW!

GRADE

8

Help your child excel in math with **9 full-length Grade 8 practice tests** designed to reflect real test formats and cover all key math standards.

With a wide variety of questions and real-world applications, this book builds the skills and confidence students need to achieve their best!



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.



Build Skills & Boost Confidence

Strengthen understanding and feel prepared for test day.

COVERS ALL ESSENTIAL TOPICS

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



2 Extra Online Practice Tests Included!

Use these two additional online practice tests for extra review after the printed tests.

testinar.com/math8



PRACTICE. PREPARE. SUCCEED.



Testinar

More Practice. More Confidence.
Better **Results**.