3 California CAASPP Grade 7 Math Practice Tests

Full-Length Test Prep with Detailed Answer Explanations

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3 Practice Tests

Grade 7 Math — Launch Sequence

Calling all future mathematicians!

You're about to launch into **3 full-length practice missions** covering every Grade 7 math topic — from proportional relationships to probability.

🚀 **Mission 1:** Explore the terrain

🚀 **Mission 2:** Navigate with precision

🚀 **Mission 3:** Achieve orbit

Three missions. One launchpad. Infinite potential.

" *Three missions is the perfect count for a focused launch. You'll cover the whole course and still have fuel to review!* **"**

🚀 Mission Briefing 🚀

Your 3-mission flight plan for Grade 7 math mastery

📋 Mission Payload

- **3 Full-Length Practice Tests** — *each covering all 9 chapters of Grade 7 math: ratios, percents, rational numbers, expressions, equations, geometry, circles & volume, statistics, and probability.*

- **Detailed Answer Explanations** — *not just the correct answer, but the reasoning behind every solution.*

- **Mission Log** — *record your scores, spot patterns, and track your trajectory toward mastery.*

🧭 Flight Plan

🚀 **Mission 1** — **Survey Orbit.** *Take this test without a timer. Get a clear read on the question types and discover which topics are your strongest — and which need fuel.*

🚀 **Mission 2** — **Guided Re-entry.** *Review your Mission 1 results, study your weak spots, then launch Mission 2 with a soft timer (70 minutes). Focus on showing full work for every multi-step problem.*

🚀 **Mission 3** — **Full Launch.** *Simulate test-day conditions: timed, quiet, independent. Compare your score with Mission 1 and celebrate your growth!*

● Multiple Choice

*Select the **single best answer** from A–D. Eliminate clearly wrong options first, then reason through what's left. Show scratch work even when it's not required — it sharpens your thinking.*

✏️ Constructed Response

*Show every step of your solution. In Grade 7, partial credit often comes from demonstrating the **process** — setting up proportions, writing equations, and justifying your reasoning — not just the final number.*

🐘 **Mission Control says:** *Space your 3 missions at least a week apart. Use the days between to review mistakes and study the topics that tripped you up. By Mission 3, you'll be flying.*

📡 Navigation Protocols 📡

Smart strategies to stay on course during every mission

✹ The S.C.A.N. Protocol

S   **Study the question**   *Read it fully. Identify what is given and what is being asked.*

C   **Choose a strategy**   *Proportion? Equation? Estimation? Pick your tool before computing.*

A   **Apply and solve**   *Show every step. Label units. Write the equation before plugging in.*

N   **Navigate back**   *Re-read the question. Does your answer match what was asked?*

☾ Pre-Launch Checklist

- ✅ *Get a full night's sleep — your brain processes what you studied while you rest.*
- ✅ *Clear your workspace and gather supplies before you begin.*
- ✅ *Set a goal: "I'll show my work on every problem today."*

✅ Green-Light Moves

- *Read the entire question before glancing at choices*
- *Circle key numbers; underline what is asked*
- *Convert fractions, decimals, and percents when it helps*
- *Use estimation to check reasonableness*
- *Skip tough problems and return with fresh eyes*

❌ Red-Alert Traps

- *Rushing through word problems*

- *Forgetting negative signs (rational numbers!)*

- *Confusing "percent of" with "percent increase"*

- *Choosing an answer that solves only part of the problem*

- *Leaving constructed-response blank instead of attempting it*

> 🐦 *Every astronaut debriefs after a mission. After each test, review every wrong answer and ask yourself* **"What would I do differently next time?"** *That single habit will launch your score.*

Math Reference Sheet

You may use this page during your practice tests!

Symbol	Name	What It Means	
$(\ )$	Parentheses	Do this part first.	$(3+4) \times 2 = 14$
10^3	Exponent	Multiply the base by itself that many times. $10^3 = 1,000$	
$\dfrac{a}{b}$	Fraction	a parts out of b equal parts; also means $a \div b$.	
$\dfrac{7}{3}$	Improper Fraction	Numerator $\geq$ denominator.	$\frac{7}{3} = 2\frac{1}{3}$
0.45	Decimal	A number with a decimal point.	$0.45 = \frac{45}{100}$
$> < =$	Comparison	Greater than, less than, equal to.	$0.5 > 0.35$
$(3,5)$	Ordered Pair	A point on the coordinate plane: (x, y).	

🔢 Key Formulas

- **Volume of a rectangular prism:**

  $V = l \times w \times h$

- **Order of operations:**

  Parentheses → Exponents → Multiply/Divide

  → Add/Subtract

- **Powers of 10:**

  $10^1 = 10 \quad 10^2 = 100$

  $10^3 = 1,000 \quad 10^4 = 10,000$

- **Fraction as division:**

  $\frac{a}{b} = a \div b$

⊞ Place Value Chart

Millions	1,000,000
Hundred-Thousands	100,000
Ten-Thousands	10,000
Thousands	1,000
Hundreds	100
Tens	10
Ones	1

Decimals

Tenths	0.1
Hundredths	0.01
Thousandths	0.001

*Each place is **10**× the place to its right, and $\frac{1}{10}$ of the place to its left.*

📖 Key Math Vocabulary

- **Sum** — *the result of addition*
- **Difference** — *the result of subtraction*
- **Product** — *the result of multiplication*
- **Quotient** — *the result of division*
- **Remainder** — *what's left over after dividing*
- **Factor** — *a number you multiply*
- **Expression** — *numbers and operations without =*
- **Equation** — *a math sentence with =*
- **Numerator** — *the top number of a fraction*
- **Denominator** — *the bottom number of a fraction*
- **Mixed number** — *a whole number + a fraction*
- **Equivalent fractions** — *fractions with equal value*
- **Decimal** — *a number written with a decimal point*
- **Volume** — *the space inside a 3D shape*
- **Coordinate plane** — *a grid with x and y axes*
- **Ordered pair** — (x, y) *location on the plane*

🔍 Word Problem Clue Words

- **Add** (+): *total, altogether, combined, sum, increase, more than*
- **Subtract** (−): *difference, how many more, fewer, remain, decrease, left*
- **Multiply** (×): *each, every, groups of, times, product, per, of (with fractions)*
- **Divide** (÷): *share equally, split, each group, how many groups, quotient, per*

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Practice Test 1

📋 *10 Questions*

✏️ Before You Start ✏️

- ✔ **Read each question carefully** before choosing your answer.
- ✔ **Show your work** on scratch paper when you need to.
- ✔ **Skip hard questions** and come back to them later.
- ✔ **Check your answers** when you're done.
- ✔ **Take your time** — there's no rush!

⭐ **You've Got This!** ⭐

Do your best and show what you know!

1. A runner covers $\frac{3}{4}$ mile in $\frac{1}{4}$ hour at a constant rate. What is k in miles per hour?

Your Answer:

2. Line A passes through $(4, 20)$ and Line B passes through $(5, 20)$. Both pass through $(0, 0)$. Which line is steeper?

Your Answer:

3. On a map, 4.5 cm represents 36 km. Two parks are 54 km apart. How far apart are they on the map?

Your Answer:

4. 42 is what percent of 168?

Your Answer:

5. Mia earns a 5% commission on all sales. She wants to earn $500 this week. How much does she need to sell?

(A) $2,500

(B) $5,000

(C) $10,000

(D) $25,000

6. A carpenter estimated a board was 8 feet long. The actual length was 8.5 feet. What is the percent error (rounded to the nearest tenth)?

(A) 5%

(B) 5.9%

(C) 6.3%

(D) 6.7%

7. Which of the following is NOT an integer?

(A) -5 (B) 0

(C) $\frac{3}{4}$ (D) 12

8. When you add two negative integers, the result is always:

(A) Positive   (B) Zero

(C) Negative   (D) It depends on the numbers

9. Evaluate $2(a+b)-c$ when $a=3$, $b=-1$, and $c=7$.

Your Answer:

10. Which expression is equivalent to $-x+8+4x-5$?

(A) $3x+3$ (B) $5x+3$

(C) $-3x+3$ (D) $3x+13$

⭐ *End of Practice Test 1* ⭐

Great job finishing the test!

☑ *My Score*

I got _____ out of 10 questions right.

*Check your answers in the **Answer Key** at the back of the book.*

💡 *Review any questions you missed. That's how we learn!*

Answer Key & Explanations

Answer Key

First try each test on your own, then check your work here.

✅ Practice Test 1 — Answer Key

| 1 | $k = 3$ mph | 2 | Line A | 3 | 6.75 cm | 4 | 25% | 5 | C | 6 | B | 7 | C |

| 8 | C | 9 | -3 | 10 | A |

💡 Time to Learn! 💡

Review the explanations below, **especially for the questions you missed**.

Understanding why each answer is correct builds stronger problem-solving skills.

Tip: Circle any questions you got wrong, then read their explanation carefully.

📖 Practice Test 1 — Detailed Explanations

1 $k = \frac{\frac{3}{4}}{\frac{1}{4}} = \frac{3}{4} \times 4 = 3$ *mph.*

2 *Line A:* $k = \frac{20}{4} = 5$. *Line B:* $k = \frac{20}{5} = 4$. *Line A has a greater slope, so it is steeper.*

3 $\frac{4.5}{36} = \frac{x}{54}$. *Cross-multiply:* $36x = 243$, *so* $x = 6.75$ *cm.*

4 *Divide the part by the whole:* $42 \div 168 = 0.25 = 25\%$.

5 $500 \div 0.05 = \$10{,}000$.

6 $\frac{|8-8.5|}{8.5} \times 100 = \frac{0.5}{8.5} \times 100 \approx 5.9\%$.

7 *Integers are whole numbers and their negatives:* $\ldots, -2, -1, 0, 1, 2, \ldots$. *The fraction $\frac{3}{4}$ is not a whole number.*

8 *Adding two negative integers gives a negative sum. Same signs: add absolute values and keep the negative sign.*

9 *Substitute:* $2(3 + (-1)) - 7 = 2(2) - 7 = 4 - 7 = -3$.

10 *Combine variable terms:* $-x + 4x = 3x$. *Combine constants:* $8 - 5 = 3$. *Result:* $3x + 3$.

✓

Well done checking your answers!

Keep practicing to strengthen your skills.

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- ✅ Hundreds of practice problems
- ✅ Complete answer key with explanations
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