

7 California CAASPP Grade 7 Math Practice Tests

Comprehensive Test Prep with Detailed Answers

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THE FORGE

7 Practice Tests

 Grade 7 Math — Forged in Practice 

Welcome to *The Forge*.

Seven tests. Seven chances to hammer your skills into something unbreakable. Each test is a piece of raw material — and you are the blacksmith.

 *Heat 1–2: Warm the metal — learn the form*

 *Heat 3–5: Shape with precision — build power*

 *Heat 6–7: Temper and finish — prove your craft*

Great skill isn't found. It's forged.

“ A sword isn't made with one strike. Seven rounds of hammering — that's how you forge something strong. ”



The Blueprint

Your 3-heat forging plan for Grade 7 mastery

What's in The Forge

- **7 Full-Length Practice Tests** — every test spans all 9 Grade 7 domains: proportional reasoning, percents, rational numbers, algebraic expressions, equations, geometry, measurement, statistics, and probability.
- **Complete Answer Explanations** — learn the craft behind every solution, not just the result.
- **Forge Record** — track your progress heat by heat and see your skills harden into mastery.

Heat I: Warm the Metal (Tests 1–2)

No timer. No pressure. Feel the material — discover the question types, learn the format, and identify which topics are solid and which need shaping.

Heat II: Shape with Precision (Tests 3–5)

Add a timer (60–75 min). Show every step of your work. After each test, study the problems you missed and practice those topics before the next heat.

Heat III: Temper & Finish (Tests 6–7)

Full test conditions: timed, quiet, independent. These final two heats prove your craft. Compare your scores with Heat I — see how far you've come.

Materials in Every Test

- | | |
|---|---|
| ● Multiple Choice — select the best answer | ● Multi-Select — choose ALL that apply |
| ● Short Answer — show your work | ● Open Response — explain your reasoning |

Master Techniques

The techniques every skilled crafter needs at the anvil

The S.T.R.I.K.E. Method

- S** **Scan** *Read the whole problem. What is given? What is asked?*
- T** **Tag** *Underline key values. Circle the operation clue words.*
- R** **Reason** *Choose a strategy: proportion, equation, diagram, or estimation.*
- I** **Implement** *Solve step by step. Write every calculation. Label units.*
- K** **Know** *Check: does the answer make sense in context?*
- E** **Evaluate** *Re-read the question. Did you answer what was actually asked?*

Forging Techniques

Technique 1: Convert between fractions, decimals, and percents freely. Many Grade 7 problems become easier in a different form.

Technique 4: On geometry questions, draw a diagram if one isn't given. Label all known measurements before computing.

Technique 2: When solving proportions, cross-multiply carefully. Keep track of which quantity is in the numerator and which is in the denominator.

Technique 5: Estimation is your ally. Before computing an exact answer, estimate. If your answer is far from the estimate, recheck your work.

Technique 3: For integer operations, use the number line mentally. Subtracting a negative? That's adding. Don't let sign rules trip you up.

Technique 6: Never leave a blank. On constructed response, even writing the equation you'd use can earn partial credit.

 **Night Before Practice:** Sleep 8+ hours. Eat a solid meal. Gather your tools (pencils, eraser, scratch paper). Tell yourself: "Every strike makes me stronger."



The Forgemaster says: "The greatest crafters don't avoid the hardest pieces — they lean into them. Review every mistake. That's where the real tempering happens."



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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. $10^3 = 1,000$
$\frac{a}{b}$	Fraction	a parts out of b equal parts; also means $a \div b$.
$\frac{7}{3}$	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 $\rightarrow$ Exponents $\rightarrow$ Multiply/Divide
 $\rightarrow$ 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 $10\times$ 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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PREVIEW



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PREVIEW

PRACTICE TEST

1

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 recipe uses cups of flour proportional to servings. If 12 servings need 9 cups, what is k in cups per serving?

(A) $\frac{3}{4}$

(B) $\frac{4}{3}$

(C) 3

(D) 9

2. A graph shows that 4 gallons of paint covers 600 square feet. The relationship is proportional. How many square feet does 1 gallon cover?

(A) 120 sq ft

(B) 150 sq ft

(C) 200 sq ft

(D) 600 sq ft

3. A garden hose fills a 60-gallon tank in 8 minutes. How long does it take to fill a 225-gallon tank?

Your Answer:

4. 18 is what percent of 72?

(A) 18%

(B) 20%

(C) 25%

(D) 36%

5. An art dealer charges 12% commission on each painting sold. If she sold a painting for \$1,500, what is the revenue for the artist (after the commission is taken)?

(A) \$180

(B) \$1,200

(C) \$1,320

(D) \$1,380



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6. Which estimate has a lower percent error?

- Estimate A: guessed 45, actual was 50
- Estimate B: guessed 95, actual was 100

- (A) Estimate A (10% error) (B) Estimate B (5% error)
- (C) They have the same percent error (D) Cannot be determined

7. Order from least to greatest: -7 , 3 , -1 , 0 , -4 .

Your Answer:

8. What is $(-3) + (-9) + 4$?

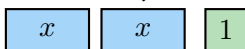
- (A) -8 (B) -16
- (C) 10 (D) 2

9. Write an expression for "9 less than the quotient of a number m and 5."

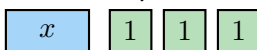
Your Answer:

10. Look at the two groups of algebra tiles below. Which expression represents their sum?

Group 1



Group 2



- (A) $3x + 3$ (B) $2x + 4$
- (C) $3x + 4$ (D) $2x + 3$



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★ *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 A | 2 B | 3 30 minutes | 4 C | 5 C | 6 B | 7 -7, -4, -1, 0, 3 |
| 8 A | 9 $\frac{m}{5} - 9$ | 10 C | | | | |

💡 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 $k = \frac{9}{12} = \frac{3}{4}$ cups per serving.

2 Unit rate = $\frac{600}{4} = 150$ sq ft per gallon. This is the y -value at $x = 1$ on the graph.

3 Rate: $60 \div 8 = 7.5$ gal/min. Time: $225 \div 7.5 = 30$ minutes.



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4 Divide the part by the whole: $18 \div 72 = 0.25 = 25\%$.

5 Commission: $1,500 \times 0.12 = \$180$. Artist gets: $1,500 - 180 = \$1,320$.

6 A: $\frac{5}{50} \times 100 = 10\%$. B: $\frac{5}{100} \times 100 = 5\%$. Estimate B has lower percent error.

7 On a number line from left to right: $-7 < -4 < -1 < 0 < 3$.

8 Add the negatives first: $(-3) + (-9) = -12$. Then $(-12) + 4 = -8$.

9 "The quotient of m and 5" is $\frac{m}{5}$. "9 less than" means subtract 9: $\frac{m}{5} - 9$.

10 Group 1: $2x + 1$. Group 2: $x + 3$. Sum: $(2x + 1) + (x + 3) = 3x + 4$.



Well done checking your answers!

Keep practicing to strengthen your skills.



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THANK YOU

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Get the Full Book!

This preview shows just a small sample of what's inside.

The complete book includes:

- ✓ *All chapters and topics*
- ✓ *Hundreds of practice problems*
- ✓ *Complete answer key with explanations*
- ✓ *Colorful visuals and step-by-step examples*
- ✓ *Reference sheets and progress trackers*

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