

5

Kansas KAP

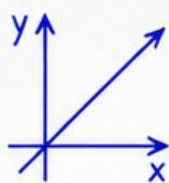
GRADE

7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$$



$$V = \pi r^2 h$$



5 PRINTED
TESTS



2 ONLINE
TESTS

USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



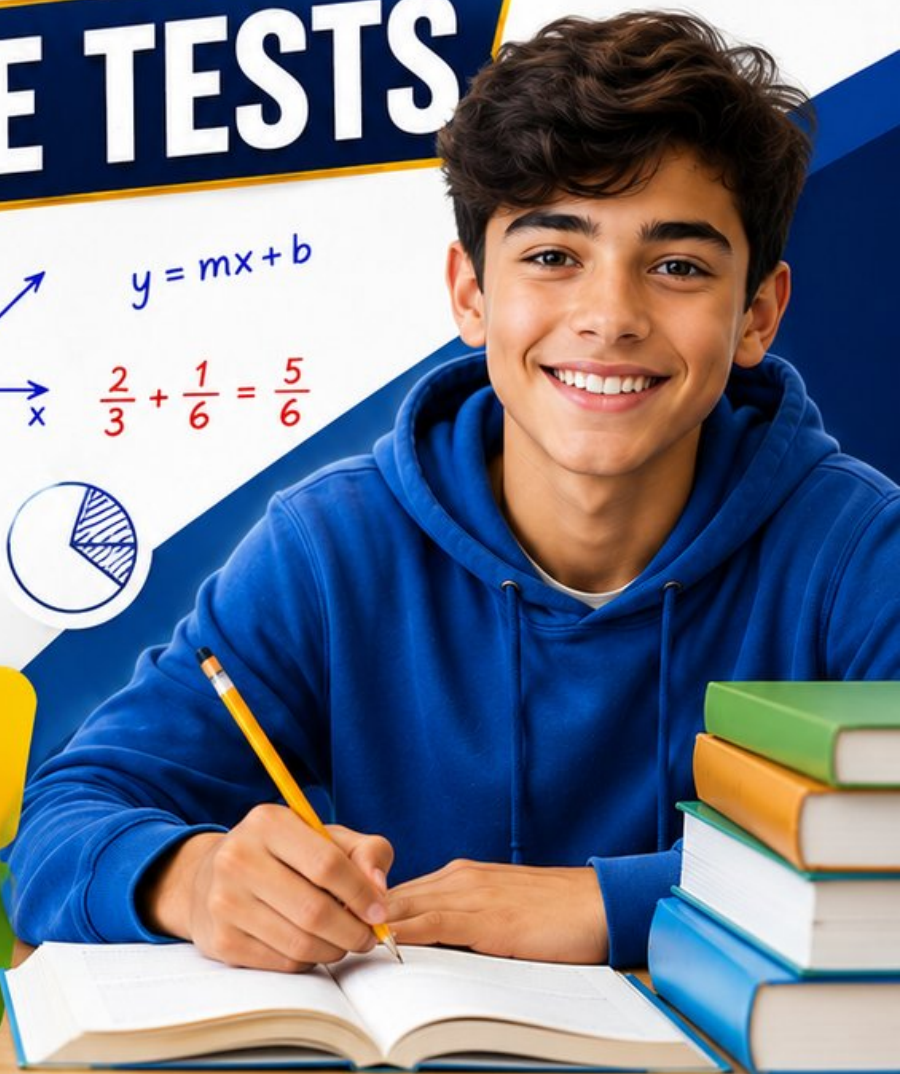
Strengthen
Math Skills



Detailed Answers
& Explanations

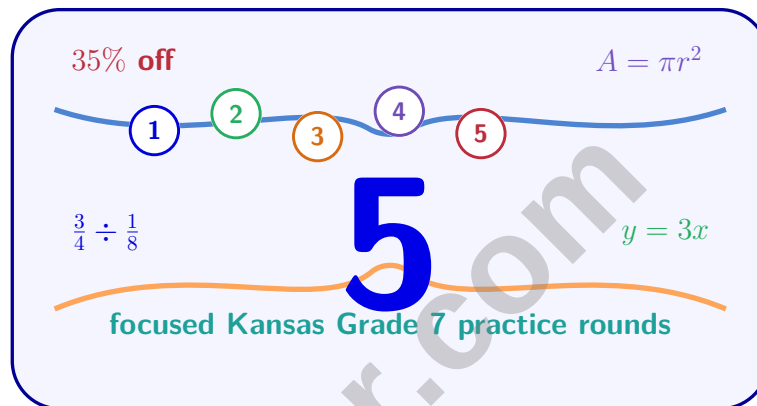


Improve Test
Performance



5 Kansas KAP Grade 7 Math Practice Tests

Sharpened Standards Practice with Explanations and Answer Keys



Five complete 40-question Grade 7 KAP practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Kansas Grade 7 Problem Solver!

Five focused rounds for sharper KAP math thinking

This book gives you five full Grade 7 KAP math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Kansas 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 five-session plan for confident Grade 7 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.

Kansas 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?

Five KAP tests, 200 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 3–5	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



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& answers

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- 1) A copy machine prints $\frac{4}{5}$ of a document in $\frac{2}{5}$ minute. How many documents can it print in 1 minute?
- ☐ A. $\frac{8}{25}$ documents ☐ C. $\frac{1}{2}$ document
☐ B. 1 document ☐ D. 2 documents
- 2) Which is the simplest form of $8 - (-1)$?
- ☐ A. 7 ☐ C. -7
☐ B. -9 ☐ D. 9
- 3) A plant grew 12 cm. This is 15% of its total final height. What was the total height?
- ☐ A. 60 cm ☐ C. 80 cm
☐ B. 72 cm ☐ D. 90 cm
- 4) An error analysis: A student calculates the final price of a \$125 item with 32% discount plus 7% tax by doing: $125 \times 0.32 = \$40$ (discount amount), then $125 - 40 = \$85$ (discounted price), then $85 + 0.07 = \$85.07$. What is the student's error?
- ☐ A. There is no error. ☐ C. Student miscalculated the discount amount.
☐ B. Student applied discount and tax in the wrong order. ☐ D. Student added 0.07 instead of 7% of \$85.
- 5) The additive inverse (opposite) of -14 is which value?
- ☐ A. 14 ☐ C. 0
☐ B. -14 ☐ D. $\frac{1}{14}$



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6) Simplify: $-\frac{1}{2}a + \frac{3}{2}a - a$

☐ A. a

☐ C. $\frac{1}{2}a$

☐ B. 0

☐ D. $2a$

7) A sector measuring 252° represents what percent of a circle?

☐ A. 63%

☐ C. 75%

☐ B. 70%

☐ D. 85%

8) What percent is $\frac{1}{20}$?

☐ A. 2%

☐ C. 20%

☐ B. 50%

☐ D. 5%

9) Convert $\frac{19}{25}$ to a decimal.

☐ A. 0.19

☐ C. 0.76

☐ B. 0.25

☐ D. 0.92

10) Evaluate $x^2 + 3x - 5$ when $x = 3$.

☐ A. 7

☐ C. 19

☐ B. 13

☐ D. 23

11) A student claims: "The relationship is proportional because the y -values keep increasing." Is this correct?

☐ A. Yes, increasing y is the definition

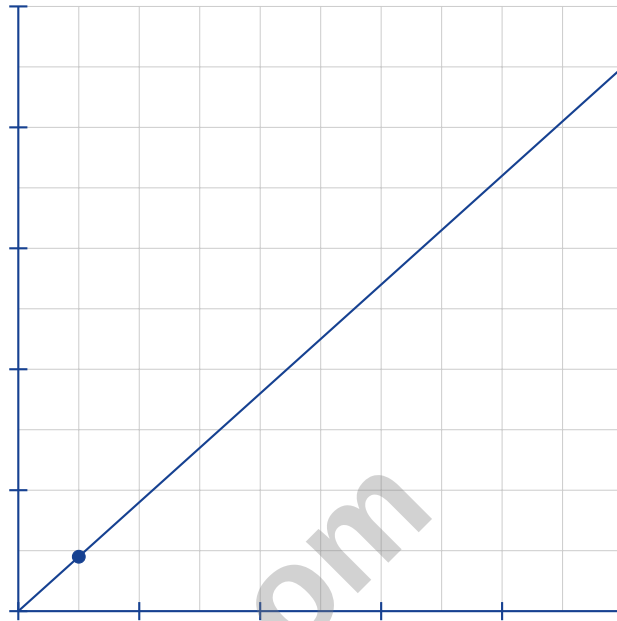
☐ C. Yes, but only if x also increases

☐ B. Cannot determine without seeing the data

☐ D. No; must have constant ratio y/x



Grams of protein



Servings

12)

A food label shows protein content proportional to servings. What is the protein per serving?

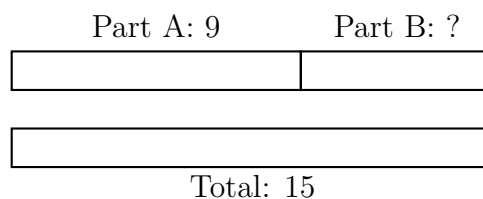
☐ A. 10 grams

☐ C. 9 grams

☐ B. 1 gram

☐ D. 0.9 grams

13) A bar model is shown. Find the missing length.


☐ A. 6

☐ C. -6

☐ B. 24

☐ D. 5

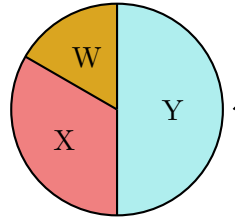

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- 1) A recipe requires $\frac{2}{3}$ cup of sugar. If you make half the recipe, then add $\frac{1}{4}$ cup extra, how much sugar do you use?
- ☐ A. $\frac{3}{7}$ cup ☐ C. $1\frac{1}{12}$ cups
☐ B. $\frac{7}{12}$ cup ☐ D. $\frac{5}{12}$ cup
- 2) A city surveyed only the downtown area (100 people) and found 20 supported a new park. If the city surveyed a larger, more random sample and found 15% support, which statement is true?
- ☐ A. The first sample is more reliable ☐ C. Both samples show the same
☐ B. The second sample likely better represents the whole city proportion
☐ D. Neither sample is large enough
- 3) A person spends money according to the 50/30/20 rule: 50% on needs, 30% on wants, 20% on savings. If monthly income is \$2,400, how much is allocated to wants?
- ☐ A. \$480 ☐ C. \$720
☐ B. \$576 ☐ D. \$1,200
- 4) A concert requires at least 200 ticket sales to break even. If 47 tickets have been sold, how many more are needed?
- ☐ A. $47 + t \geq 200$ ☐ C. $t > 200$
☐ B. $t \geq 153$ ☐ D. $t < 153$
- 5) A rectangular prism has base dimensions 9 cm $\times$ 7 cm and height 2 cm. A student forgets to include one of the two side faces with dimensions 9 $\times$ 2 cm. If the correct surface area is SA_{correct} , what percentage of the correct surface area is their incorrect answer?
- ☐ A. 25% ☐ C. 75%
☐ B. 50% ☐ D. 91%



6) Which group is an example of a *population* in a statistical study?

- ☐ A. 200 students randomly selected from all high schools in Texas
- ☐ B. All teenagers who own a smartphone
- ☐ C. Shoppers interviewed at one mall on Saturday
- ☐ D. The 50 customers called to participate in a phone survey



7)

The spinner above has 3 sections. Section W is $\frac{1}{6}$ of the circle, section X is $\frac{1}{3}$ of the circle, and section Y is the remaining part. If the spinner is spun 60 times, approximately how many times would you expect to land on section Y?

- ☐ A. 10 times
- ☐ B. 20 times
- ☐ C. 30 times
- ☐ D. 40 times

8) A balance scale has $3x$ on the left and 24 on the right. What is x ?

- ☐ A. $x = 4$
- ☐ B. $x = 6$
- ☐ C. $x = 8$
- ☐ D. $x = 12$

9) A rectangular classroom is 6 m by 8 m. The teacher makes a scale drawing with scale 1 cm : 50 cm. What are the drawing dimensions?

- ☐ A. 0.6 cm by 0.8 cm
- ☐ B. 6 cm by 8 cm
- ☐ C. 12 cm by 16 cm
- ☐ D. 60 cm by 80 cm



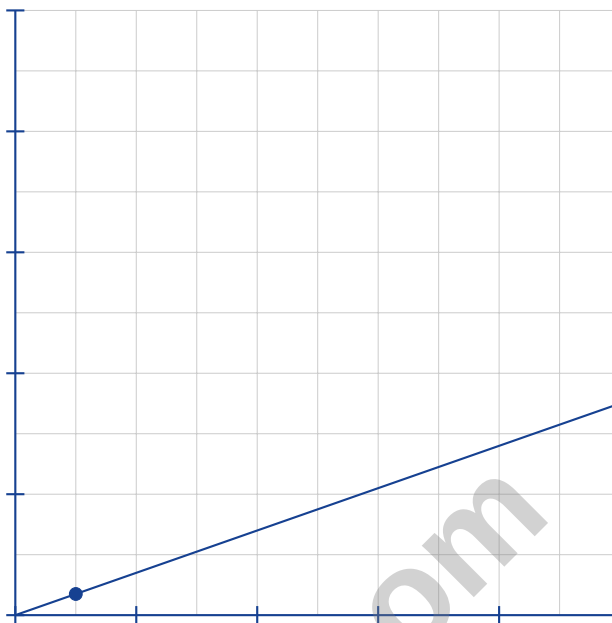
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& answers

- 1) A spinner with unequal sections is spun many times in a simulation. The relative frequency of one outcome converges to 0.32 after 10000 spins. What does this tell you about the theoretical probability of that outcome?
- ☐ A. The theoretical probability is exactly 0.32
- ☐ B. The theoretical probability is approximately 0.32
- ☐ C. The theoretical probability is less than 0.32
- ☐ D. The theoretical probability cannot be determined from this information
- 2) Evaluate $2x + 4y - 3z$ when $x = 1$, $y = 2$, and $z = -1$.
- ☐ A. 13
- ☐ B. 11
- ☐ C. 15
- ☐ D. 5
- 3) Evaluate: 6^0
- ☐ A. 0
- ☐ B. 1
- ☐ C. 6
- ☐ D. -1
- 4) A baker measures flour in 1-cup scoops. She needs 3 times the number of scoops of flour for dough, plus 2 additional cups for dusting. If she uses 11 cups of flour total, how many scoops s did she use for dough?
- ☐ A. $3s + 2 = 11$
- ☐ B. $3s = 11$
- ☐ C. $2s + 3 = 11$
- ☐ D. $s + 3 + 2 = 11$
- 5) A blueprint shows a room measuring 3 cm by 5 cm at a scale of 1 cm : 1 m. What are the actual room dimensions?
- ☐ A. 3 m by 5 m
- ☐ B. 300 cm by 500 cm
- ☐ C. 1 m by 1.67 m
- ☐ D. 6 m by 10 m



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Kilograms



Tablets of soap

6)

A batch of soap tablets has a proportional mass. From the unit-rate point shown, how many kilograms do 8 tablets weigh?

☐ A. 0.35 kg

☐ C. 8.35 kg

☐ B. 28 kg

☐ D. 2.8 kg
7) What is the value of $(-18) \div 0$?
☐ A. 0

☐ C. Undefined

☐ B. -18

☐ D. -1


Kansas KAP Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 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 Kansas KAP practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\frac{4/5}{2/5} = \frac{4}{5} \times \frac{5}{2} = \frac{20}{10} = 2$ documents per minute.
- 2) **Choice D is correct.** (7.NS.1-7.NS.3) $8 - (-1) = 8 + 1 = 9$.
- 3) **Choice C is correct.** (7.RP.3) If $12 = 0.15 \times h$, then $h = \frac{12}{0.15} = 80$ cm.
- 4) **Choice D is correct.** (7.RP.3) Correct calculation: tax = $0.07 \times 85 = \$5.95$, final = $85 + 5.95 = \$90.95$. Student's error was treating 7% as the amount \$0.07 instead of computing 7% of the discounted price.
- 5) **Choice A is correct.** (7.NS.1b) The additive inverse of -14 is the number that, when added to -14 , gives 0. That number is 14, since $-14 + 14 = 0$.
- 6) **Choice B is correct.** (7.EE.1) Combine: $-\frac{1}{2}a + \frac{3}{2}a - a = -\frac{1}{2}a + \frac{3}{2}a - \frac{2}{2}a = \frac{-1+3-2}{2}a = \frac{0}{2}a = 0$.
- 7) **Choice B is correct.** (7.SP.1-7.SP.4) $252^\circ \div 360^\circ \times 100 = 70\%$.
- 8) **Choice D is correct.** (7.RP.3) Set up the proportion: $\frac{1}{20} = \frac{p}{100}$. Cross-multiply: $p = 5$, so $\frac{1}{20} = 0.05 = 5\%$.
- 9) **Choice C is correct.** (7.NS.2d) Divide $19 \div 25 = 0.76$. Since $25 = 5^2$, this is a terminating decimal. Multiply numerator and denominator by 4: $\frac{19 \times 4}{25 \times 4} = \frac{76}{100} = 0.76$.
- 10) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $(3)^2 + 3(3) - 5 = 9 + 9 - 5 = 13$.
- 11) **Choice D is correct.** (7.RP.1-7.RP.3) A proportional relationship requires constant ratio $y/x = k$, not just increasing y values.
- 12) **Choice D is correct.** (7.RP.1-7.RP.3) The unit-rate point (1, 0.9) shows 0.9 grams per serving.
- 13) **Choice A is correct.** (7.NS.1-7.NS.3) Part B = Total - Part A: $15 - 9 = 6$.
- 14) **Choice B is correct.** (7.NS.1-7.NS.3) Division by a fraction equals multiplication by the reciprocal.
- 15) **Choice B is correct.** (7.NS.1-7.NS.3) $-245 + 35 = -210$ meters.
- 16) **Choice B is correct.** (7.NS.1-7.NS.3) Net = $-45 + 120 - 30 + 85 = 130$ dollars (profit).
- 17) **Choice B is correct.** (7.NS.1-7.NS.3) The negative exponent -31 indicates a decimal far to the right, meaning an extremely tiny value.
- 18) **Choice B is correct.** (7.G.1-7.G.5) The scale factor is $\frac{28}{20} = 1.4$. We can verify: $10 \times 1.4 = 14$ ✓
- 19) **The correct answer is A, C.** (7.SP.1-7.SP.4) Sample 1: $\frac{36}{120} = 0.30$; Sample 2: $\frac{27}{90} = 0.30$. Both show 30%, so A is true. Equal proportions allow reliable population estimates (C is true). B and D is false (Sample 1 is larger at 120 vs 90).
- 20) **Choice C is correct.** (7.NS.2) $2\frac{1}{2} = \frac{5}{2}$. So $\frac{5}{2} \times 4 = \frac{20}{2} = 10$.
- 21) **Choice C is correct.** (7.NS.1-7.NS.3) $10^2 = 100$ and $11^2 = 121$. Since 120 is very close to 121, $\sqrt{120} \approx 10.95$, which is closest to 11.
- 22) **Choice B is correct.** (7.SP.5-7.SP.8) There are 4 Kings in 52 cards, so $P(\text{King}) = \frac{4}{52} = \frac{1}{13}$.
- 23) **Choice C is correct.** (7.RP.3) Total fee = $35 + (0.50 \times 80) = 35 + 40 = \75 .
- 24) **The correct answer is 3.9375 .** (7.RP.1-7.RP.3) Scale: $\frac{1}{2}$ inch : 4 feet means 1 inch : 8 feet. Dimensions on plan: $18 \div 8 = 2.25$ inches and $14 \div 8 = 1.75$ inches. Area = $2.25 \times 1.75 = 3.9375$ sq in.
- 25) **Choice D is correct.** (7.SP.1-7.SP.4) Each value appears exactly once, so there is no repeating value. There is no mode.
- 26) **Choice D is correct.** (7.RP.3) Total repayment: Principal + Interest = $\$8000 + \$1440 = \$9440$.
- 27) **Choice B is correct.** (7.G.4-7.G.6) Rectangle: $6 \times 4 = 24$ m². Triangle: $\frac{1}{2} \times 6 \times 3 = 9$ m². Total: $24 + 9 = 33$ m². The student forgot to use the triangle area formula $\frac{1}{2} \times b \times h$.
- 28) **Choice D is correct.** (7.RP.1-7.RP.3) Proportion: $\frac{1}{0.62} = \frac{300}{x}$. So $x = 300 \times 0.62 = 186$ miles.
- 29) **Choice B is correct.** (7.RP.3) With compound interest over 2 years: Final balance = $P(1+r)^2$. Since $P = 1000$ and final = 3000 (tripled), the equation is $1000(1+r)^2 = 3000$. (Note: A is wrong because it assumes 1 year; C is simple interest; D is not a compound formula.)
- 30) **Choice D is correct.** (7.RP.1-7.RP.3) From the diagram: 3 laps takes 4 minutes, so $k = 3/4 = 0.75$ laps per minute.



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Hi, Persistent Problem Solver!

◇ Some Grade 7 questions ask you to hold several ideas in your mind at once. That can feel hard, and that is exactly why practice matters. ◇

★ **Remember this:** You showed persistence by continuing through the set. That habit is powerful because difficult problems often open after one more good attempt. You practiced across 5 full Grade 7 practice tests, and that repeated effort matters. ★

Persistence Tools

- **Try a Smaller Case:** Use an easier number to see the pattern.
- **Draw It:** Make the situation visible.
- **Restate It:** Say the question in your own words.
- **Check One Step:** Fix the first unclear place.

Grade 7 test-day tip: When stuck, do not restart everything. Find the first step you trust, then rebuild from there.

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

Jay Daie

Your Persistence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **5** full-length Math practice tests and **2** online tests to help Grade 7 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:

5 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.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



Improve Understanding

Learn with clear explanations and step-by-step solutions.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Boost Performance

Apply your knowledge and achieve your best score!

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- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

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



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Don't lose it—your extra practice and success start here!



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