

5

New York NYSTP

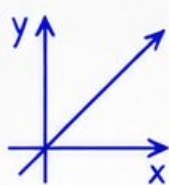
GRADE

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



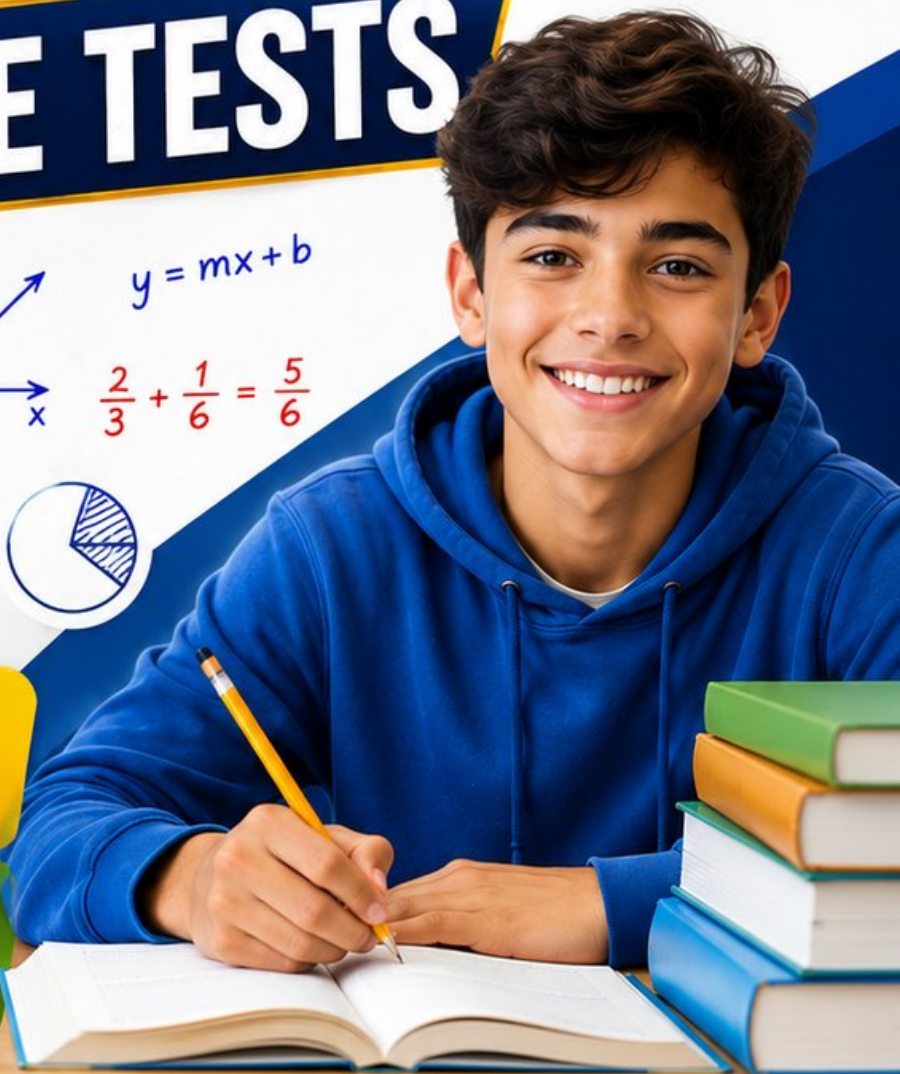
Strengthen
Math Skills



Detailed Answers
& Explanations



Improve Test
Performance



5 New York NYSTP Grade 7 Math Practice Tests

Five Standards-Aligned Tests with Review and Explanation Support



Five complete 40-question Grade 7 NYSTP 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, New York Grade 7 Problem Solver!

Five focused rounds for sharper NYSTP math thinking

This book gives you five full Grade 7 NYSTP 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 New York 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.

New York 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 NYSTP 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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For more practice
& answers

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1) A circle has a radius of 10 inches. If you want to express the area in terms of π (not as a decimal), which answer is correct?

☐ A. $10\pi \text{ in}^2$

☐ B. $20\pi \text{ in}^2$

☐ C. $100\pi \text{ in}^2$

☐ D. $200\pi \text{ in}^2$

2) What is $-9 - (-3)$?

☐ A. -12

☐ B. 12

☐ C. 6

☐ D. -6

3) A clearance rack shows final prices after all discounts and markups have been applied. An item shows “Final: \$57.60, originally \$96.” If the discount percent was the same across all items, what was the discount percent?

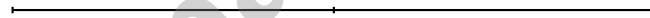
☐ A. 33%

☐ B. 38.4%

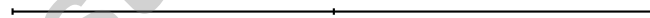
☐ C. 50%

☐ D. 40%

0% 50% 100%



4) 0 ? 200



The double number line shows percents and values. What is 50% of 200?

☐ A. 50

☐ B. 75

☐ C. 100

☐ D. 150



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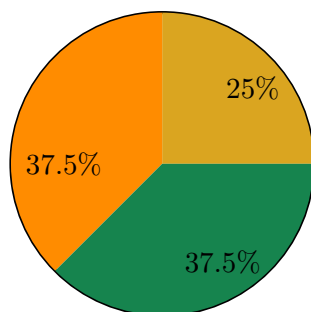
5) Evaluate $2 + (-6) + 10$.

☐ A. -14

☐ B. 12

☐ C. 18

☐ D. 6



6)

The circle graph shows student class enrollment distribution. Gold is Algebra (25%), orange is Geometry (37.5%), and coral is Statistics (37.5%). If 800 students are surveyed, how many are in Geometry?

☐ A. 200

☐ B. 250

☐ C. 300

☐ D. 400

7) What is $\frac{3}{4} \div \frac{1}{2}$?

☐ A. $\frac{3}{8}$

☐ B. $\frac{2}{3}$

☐ C. $\frac{3}{2}$

☐ D. 2

8) A lemonade stand charges \$0.75 per cup. What is the constant of proportionality for revenue per cup?



- 9) A model railroad layout has a scale of 1 : 160. If a real railroad track is 50 meters long, how long should the model track be in centimeters?

- 10) Convert 0.48 to a fraction in simplest form.

☐ A. $\frac{48}{100}$
☐ B. $\frac{24}{50}$

☐ C. $\frac{12}{25}$
☐ D. $\frac{6}{13}$

- 11) A chemist mixes $\frac{3}{8}$ liter of solution A and $\frac{5}{8}$ liter of solution B. What is the total volume?

☐ A. $\frac{8}{16}$ liters
☐ B. 1 liter

☐ C. $1\frac{1}{8}$ liters
☐ D. $\frac{2}{8}$ liters

- 12) A runner covers $\frac{3}{4}$ of a mile in $\frac{1}{6}$ of an hour. What is the runner's speed in miles per hour?

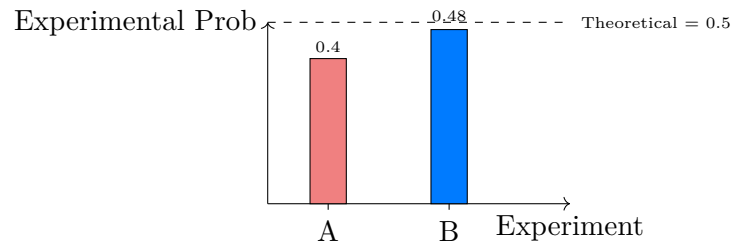
☐ A. $\frac{1}{12}$ mph
☐ B. $\frac{1}{8}$ mph

☐ C. $\frac{3}{4}$ mph
☐ D. $\frac{9}{2}$ mph



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- 1) A researcher conducted two experiments. Experiment A: flipped a coin 60 times, got heads 24 times. Experiment B: flipped a coin 600 times, got heads 288 times. Which statement best describes these results?



- ☐ A. Experiment A's result is more reliable because it is smaller.
 ☐ C. Both experiments give the same experimental probability.
- ☐ B. Experiment B's result is closer to the theoretical probability of 0.5.
 ☐ D. Experiment A proves the coin is biased.
- 2) A quality inspector sampled 250 microchips and found 10 were faulty. The manufacturer produces 50000 chips per week. How many faulty chips are expected per week?
- ☐ A. 1000
 ☐ C. 2000
- ☐ B. 1500
 ☐ D. 2500
- 3) A rectangular field has dimensions 200 m $\times$ 150 m. On a scale drawing where the scale is 1 cm : 10 m, what is the perimeter of the field in the scale drawing?
- ☐ A. 700 cm
 ☐ C. 70 cm
- ☐ B. 35 cm
 ☐ D. 350 cm

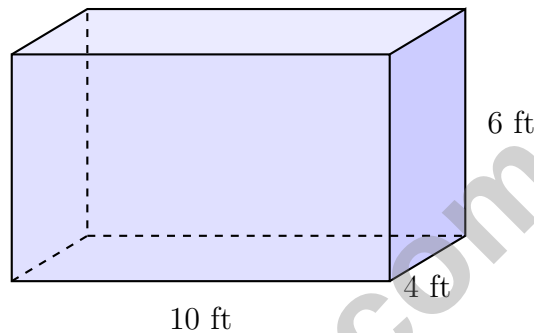


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- 4) The equation $v = \frac{2}{7}w$ represents a proportional relationship. Which table matches this equation?

w	7	14	28
v	2	4	8

- ☐ A. No, the ratios are not constant ☐ C. No, the constant is 2
☐ B. No, the constant is $\frac{1}{4}$ ☐ D. Yes, this table matches $v = \frac{2}{7}w$



5)

The colored isometric view represents a rectangular prism. Which calculation correctly finds its surface area?

- ☐ A. $2(10 + 6 + 4)$ ☐ C. $2(10 \times 6 + 10 \times 4 + 6 \times 4)$
☐ B. $2(10 \times 6 \times 4)$ ☐ D. $10 \times 6 \times 4$
- 6) Solve: $4x < 20$
- ☐ A. $x > 5$ ☐ C. $x \geq 5$
☐ B. $x < 5$ ☐ D. $x < 80$



- 1) A ratio table shows the relationship between pounds of coffee and cost. The table indicates that 4 pounds cost \$28. If the relationship is proportional, how much do 10 pounds cost?

☐ A. \$60 ☐ C. \$74
☐ B. \$84 ☐ D. \$70

- 2) Find x : $-2x + 5 = 1$

☐ A. $x = -2$ ☐ C. $x = 2$
☐ B. $x = 1$ ☐ D. $x = 3$

- 3) A rental car costs \$25 per day. Which table represents the cost for different numbers of days?

Days	1	2	3
Option A: Cost	25	50	75
Option B: Cost	26	50	74

☐ A. Option A ☐ C. Neither
☐ B. Option B ☐ D. Both

- 4) A bank account grows at a constant rate over months. After 3 months, the balance is \$450. After 8 months, the balance is \$1200. Which statement explains whether this relationship is proportional?

☐ A. Cannot determine without more data. ☐ C. No, because $1200 - 450$ is not equal to $8 - 3$.
☐ B. No, because the balances are different. ☐ D. Yes, because the unit rate is constant.



- 5) A recipe calls for $\frac{2}{5}$ cup of sugar. What percent of a whole cup is this?
- ☐ A. 20% ☐ C. 40%
- ☐ B. 25% ☐ D. 50%
- 6) Liam's monthly budget allocates 40% to expenses, 30% to savings, 20% to investments, and 10% to charity. If his monthly income is \$2,500, how much does he invest each month?
- ☐ A. \$250 ☐ C. \$750
- ☐ B. \$1,000 ☐ D. \$500
- 7) Evaluate: $5.2 - 7.1$
- ☐ A. -1.9 ☐ C. 12.3
- ☐ B. 1.9 ☐ D. -12.3
- 8) A student finds an error in her work. She wrote $-5 \times 4 = -20$, but then incorrectly concluded the answer was +20. What was her mistake?
- ☐ A. She multiplied incorrectly; should be -20. ☐ C. She multiplied correctly but then flipped the sign.
- ☐ B. She forgot to apply the sign rule for multiplication. ☐ D. The negative sign should apply only to the 4, not the result.
- 9) Express 0.000000008 in scientific notation.
- ☐ A. 8×10^{-8} ☐ C. 8×10^{-10}
- ☐ B. 8×10^{-9} ☐ D. 80×10^{-9}



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New York NYSTP 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 New York NYSTP practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.G.4-7.G.6) Using $A = \pi r^2$ with $r = 10$: $A = \pi \times 10^2 = 100\pi \text{ in}^2$ (exact form).
- 2) **Choice D is correct.** (7.NS.1-7.NS.3) $-9 - (-3) = -9 + 3 = -6$.
- 3) **Choice D is correct.** (7.RP.3) Discount amount = $96 - 57.60 = \$38.40$. Percent = $(38.40/96) \times 100 = 40\%$.
- 4) **Choice C is correct.** (7.RP.3) 50% is half; half of 200 is 100.
- 5) **Choice D is correct.** (7.NS.1b) Add left to right: $2 + (-6) = -4$, then $-4 + 10 = 6$. Or rearrange: $2 + 10 = 12$, then $12 + (-6) = 6$.
- 6) **Choice C is correct.** (7.SP.1-7.SP.4) 37.5% of $800 = 0.375 \times 800 = 300$ students.
- 7) **Choice C is correct.** (7.NS.1-7.NS.3) Multiply by the reciprocal: $\frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \times \frac{2}{1} = \frac{6}{4} = \frac{3}{2}$.
- 8) **The correct answer is 0.75.** (7.RP.1-7.RP.3) Revenue is price per cup times cups sold, so the constant is 0.75.
- 9) **The correct answer is 31.25.** (7.RP.1-7.RP.3) $50 \text{ m} = 5000 \text{ cm}$. Divide by scale: $5000 \div 160 = 31.25 \text{ cm}$.
- 10) **Choice C is correct.** (7.NS.2d) $0.48 = \frac{48}{100}$. Divide both by GCD(48, 100) = 4: $\frac{48 \div 4}{100 \div 4} = \frac{12}{25}$.
- 11) **Choice B is correct.** (7.NS.1-7.NS.3) Total volume = $\frac{3}{8} + \frac{5}{8} = \frac{8}{8} = 1$ liter.
- 12) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\frac{3/4}{1/6} = \frac{3}{4} \times 6 = \frac{18}{4} = \frac{9}{2} = 4.5 \text{ mph}$.
- 13) **Choice D is correct.** (7.RP.1-7.RP.3) The ratio is $y/x = 2/6 = 1/3$. For a fourth point: $y = \frac{x}{3}$. Check: (15, 5) gives $5 = \frac{15}{3}$ (correct).
- 14) **Choice C is correct.** (7.RP.1-7.RP.3) $y = 3.5 \times 4 = 14$.
- 15) **Choice D is correct.** (7.RP.3) Using the proportion $\frac{30}{100} = \frac{x}{120}$, cross-multiply: $30 \times 120 = 100x$, so $x = 36$ items.
- 16) **Choice D is correct.** (7.RP.3) Simple interest = $\$5,000 \times 0.03 \times 2 = \300 .
- 17) **Choice B is correct.** (7.NS.1-7.NS.3) $-5 + 12 = 7^\circ\text{C}$.
- 18) **Choice C is correct.** (7.NS.1-7.NS.3) Double: $\frac{2}{3} \times 2 = \frac{4}{3} = 1\frac{1}{3}$ cups.
- 19) **The correct answer is A, C.** (7.SP.1-7.SP.4) Sample 1: $\frac{48}{200} = 0.24$; Sample 2: $\frac{36}{150} = 0.24$; Sample 3: $\frac{60}{250} = 0.24$. All are equal, so A is correct. These proportions can be used to estimate the full population (C). B is false (all equal), D is misleading, and E contradicts the actual data.
- 20) **The correct answer is \$6000.** (7.RP.3) $I = 5000 \times 0.08 \times 2.5 = \1000 . $A = 5000 + 1000 = \$6000$.
- 21) **Choice A is correct.** (7.NS.1-7.NS.3) Statement A is correct: $4 \times 4 = 16$ and $\sqrt{16} = 4$ (principal square root is positive). Statement B is false: $\sqrt{25} = 5$, not -5 (the square root symbol yields only the positive root). Statement C is false: $6^2 = 36$, not 37. Statement D is true but only A is the correct answer for this single-answer MC.
- 22) **Choice B is correct.** (7.NS.1-7.NS.3) In proper scientific notation, the coefficient must satisfy $1 \leq a < 10$. $0.0000625 = 6.25 \times 10^{-5}$.
- 23) **Choice B is correct.** (7.NS.2) $\frac{2}{3} \times \frac{5}{6} = \frac{2 \times 5}{3 \times 6} = \frac{10}{18} = \frac{5}{9}$ (simplified). Multiply numerators and denominators, then reduce.
- 24) **Choice C is correct.** (7.SP.5-7.SP.8) Prime numbers on a die: 2, 3, 5 (three primes). $P(\text{prime}) = \frac{3}{6} = \frac{1}{2}$.
- 25) **Choice A is correct.** (7.SP.3) From the visual: Team A's box (2–6) has median at 4.5. Team B's box (4–9) has median at 6.5. Team B's box spans 5 units (4–9) vs. Team A's 4 units (2–6), so Team B has more spread.
- 26) **Choice C is correct.** (7.RP.3) Tip: $0.25 \times 60 = \$15$. Total amount paid: $60 + 15 = \$75$.
- 27) **Choice A is correct.** (7.SP.1-7.SP.4) For $n = 20$ (even), median is between positions $n/2 = 10$ and $n/2 + 1 = 11$.
- 28) **Choice B is correct.** (7.G.4-7.G.6) Rectangle: $5 \times 4 = 20 \text{ in}^2$. Trapezoid: $\frac{1}{2}(5 + 3) \times 2 = 8 \text{ in}^2$. Total: $20 + 8 = 28 \text{ in}^2$.
- 29) **The correct answer is 12%.** (7.RP.3) Percent error = $\frac{|110 - 125|}{125} \times 100\% = \frac{15}{125} \times 100\% = 12\%$.
- 30) **Choice B is correct.** (7.RP.1-7.RP.3) Ratio 2 : 8 simplifies to 1 : 4 (divide both by 2). Option D incorrectly states 3 : 1 instead of 4 : 1.



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!

TOPICS COVERED

- ✓ Ratios & Proportions
- ✓ 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.



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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



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