

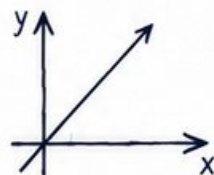
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New York
NYSTPGRADE
7
MATH

PRACTICE TESTS

Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs

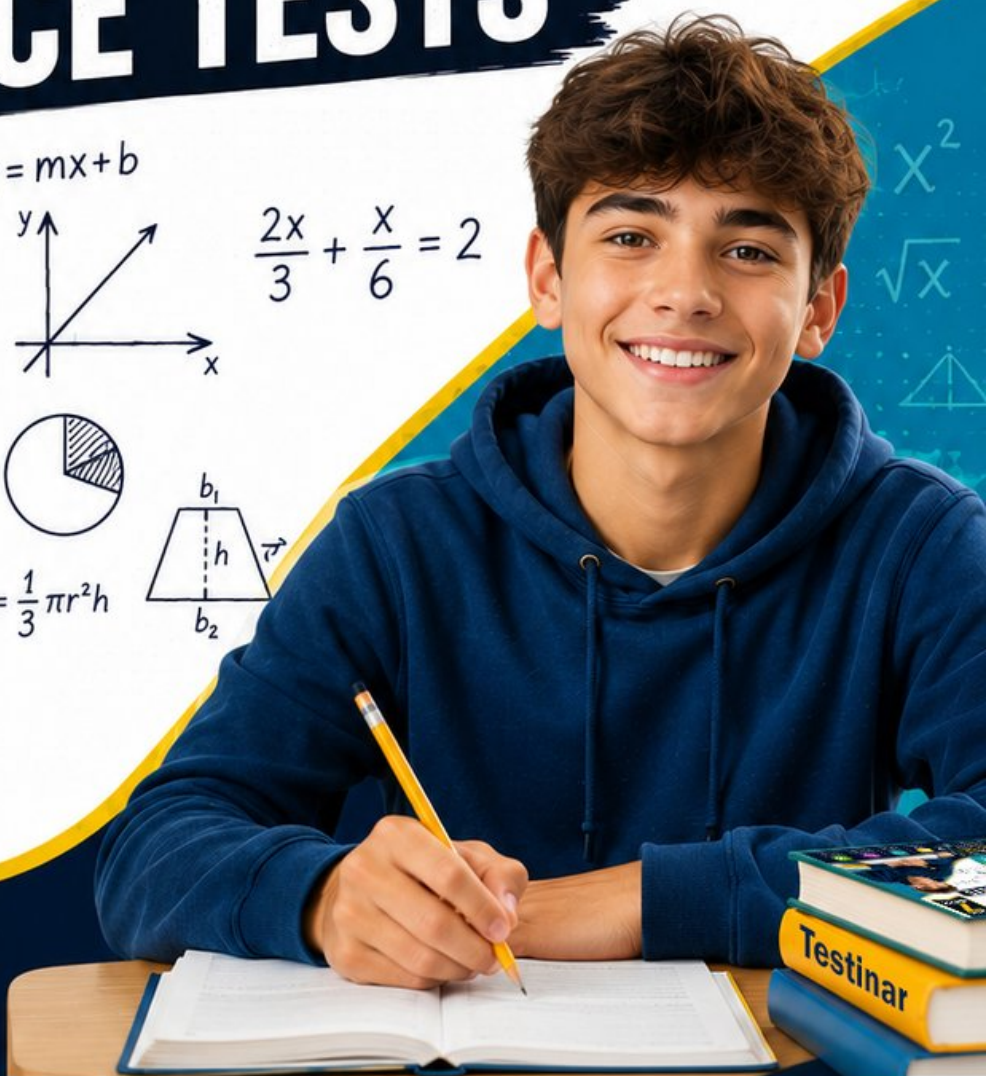
$$y = mx + b$$



$$\frac{2x}{3} + \frac{x}{6} = 2$$



$$V = \frac{1}{3} \pi r^2 h$$

4 PRINTED
TESTS2 ONLINE
TESTSUSE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTSFOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.Build
ConfidenceStrengthen
Math SkillsDetailed Answers
& ExplanationsImprove Test
Performance

4 New York NYSTP Grade 7 Math Practice Tests

New York Math Practice for Review, Stamina, and Confidence



Four 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!

Four focused rounds for sharper NYSTP math thinking

This book gives you four 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 four-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?

Four NYSTP tests, 160 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 3–4	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

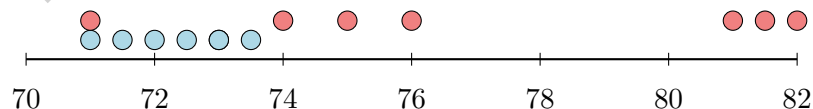
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- 1) Three angles form a straight line and measure 35° , 62° , and x° . What is x ?
- ☐ A. 27° ☐ C. 97°
☐ B. 83° ☐ D. 180°
- 2) A hula hoop has circumference 188.4 cm. Using $\pi \approx 3.14$, what is its radius?
- ☐ A. 90 cm ☐ C. 15 cm
☐ B. 60 cm ☐ D. 30 cm
- 3) A circular rug has a radius of 2.5 meters. What is the approximate area of the rug?
 Use $\pi \approx 3.14$.
- ☐ A. 7.85 m^2 ☐ C. 19.625 m^2
☐ B. 15.7 m^2 ☐ D. 39.25 m^2
- 4) A soup can has a radius of 2 inches and a height of 4 inches. What is the volume of the can? Use $\pi \approx 3.14$.
- ☐ A. 25.12 in^3 ☐ C. 75.36 in^3
☐ B. 50.24 in^3 ☐ D. 100.48 in^3
- 5) The dot plots below show the daily temperatures (in $^\circ\text{F}$) for two months:

Month 2:

Month 1:



Which month is more consistent in temperature?

- ☐ A. Month 1 (tighter cluster) ☐ C. Both have equal consistency
☐ B. Month 2 (wider spread) ☐ D. Cannot tell from dot plots



- 6) A line graph shows monthly website traffic (in thousands of visitors): Jan 10, Feb 15, Mar 20, Apr 18, May 25, Jun 30. Which month shows the largest increase compared to the previous month?
- ☐ A. June (increase of 5) ☐ C. May (increase of 7)
- ☐ B. March (increase of 5) ☐ D. February (increase of 5)
- 7) A bag contains 2 dimes, 3 nickels, and 5 pennies. A coin is picked at random. What is the probability of not picking a penny?
- ☐ A. $\frac{3}{10}$ ☐ C. $\frac{7}{10}$
- ☐ B. $\frac{5}{10}$ ☐ D. $\frac{1}{5}$
- 8) Two box plots compare the number of online orders per day for two e-commerce sites. Site X: Q1 = 50, Median = 75, Q3 = 100. Site Y: Q1 = 40, Median = 75, Q3 = 110. Which site has more consistent order volume?
- ☐ A. Site X (lower IQR: 50 vs. 70) ☐ C. Both sites are identical
- ☐ B. Site Y (higher Q3 means more orders) ☐ D. Site Y (lower Q1 means better baseline)
- 9) A business has a loss of \$55 (represented as -55). To break even, what signed number must be added to the loss?



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10) A bag of 20 tokens contains 8 red, 7 blue, and 5 green. Two tokens are drawn WITH replacement. Which statement correctly describes this scenario?

- ☐ A. The events are dependent because we remove tokens
- ☐ B. The second draw has probabilities different from the first
- ☐ C. The probability of each draw remains the same because of replacement
- ☐ D. Red is impossible on the second draw if red appeared first

11) A data set from a random sampling of 300 high school students shows:

Transport Mode	Count
Bus	120
Car	145
Walk/Bike	35

Based on this experimental data, if a school has 2400 students, how many are expected to use a car?

- ☐ A. 145
- ☐ B. 380
- ☐ C. 960
- ☐ D. 1160

12) The stem-and-leaf plot displays:

Stem	Leaves
3	4, 7, 9
4	1, 2, 5, 8
5	0, 3, 6

Which statement is true?

- ☐ A. The data ranges from 30 to 56
- ☐ B. Stem 4 contains the fewest values
- ☐ C. There are 10 data points total
- ☐ D. The median falls in stem 4



1) What is the repeating block in $\frac{2}{7}$?

☐ A. $0.\overline{2}$

☐ C. $0.\overline{2857}$

☐ B. $0.\overline{285714}$

☐ D. $0.\overline{28}$

2) A family's monthly expenses total \$2,500. If their monthly income is \$3,000, what percentage of their income do they spend?

3) What is $-6 \times \frac{2}{3}$?

☐ A. -9

☐ C. 4

☐ B. -4

☐ D. 9

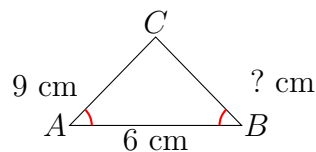
4) A truck travels 350 miles and uses 25 gallons of gas. If gas costs \$3.50 per gallon, what is the cost per mile?

☐ A. \$0.20 per mile

☐ C. \$0.30 per mile

☐ B. \$0.35 per mile

☐ D. \$0.25 per mile



5)

A triangle has side lengths of 6 cm and 9 cm. Which length CANNOT be the third side?

☐ A. 5 cm

☐ C. 16 cm

☐ B. 10 cm

☐ D. 8 cm

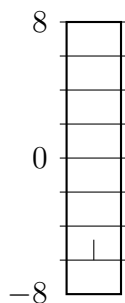


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6) A sector of a circle is best described as:

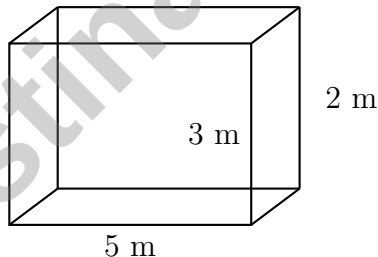
- ☐ A. A line through the circle ☐ C. A chord and an arc
☐ B. A pie-shaped region bounded by two radii and an arc ☐ D. Half of a circle

7) A thermometer shows -8 degrees. Which temperature is the opposite change?



Current: -8°

- ☐ A. 0 degrees ☐ C. -16 degrees
☐ B. 4 degrees ☐ D. 8 degrees



8)

A rectangular prism with dimensions $5\text{ m} \times 3\text{ m} \times 2\text{ m}$ is shown above. Calculate its surface area.

- ☐ A. 30 m^2 ☐ C. 84 m^2
☐ B. 62 m^2 ☐ D. 120 m^2



1) If a number is positive, its opposite is:

☐ A. Negative

☐ C. Zero

☐ B. Positive

☐ D. The same magnitude doubled

2) Two histograms show daily step counts for sedentary workers vs. active workers. Sedentary: concentrated at 3000–5000 steps. Active: concentrated at 10000–12000 steps. What is the most valid conclusion?

☐ A. Active workers get significantly more steps

☐ C. Sedentary workers should not be hired

☐ B. Both groups have identical activity levels

☐ D. Job type does not affect step count levels

3) A stem-and-leaf plot is created from test scores. Stem 8 has leaves 1, 2, 4, 5, 6, 7, 9. Stem 9 has leaves 0, 1, 3. Which score appears most frequently in the dataset?

☐ A. 81

☐ C. 90

☐ B. 89

☐ D. No mode (each score appears once)

4) Convert $\frac{7}{8}$ to a decimal by performing long division.

5) A platform is designed as two congruent trapezoids joined at their parallel sides. Each trapezoid has parallel sides of 6 m and 4 m with height 3 m. What is the total platform area?

☐ A. 15 m²

☐ C. 45 m²

☐ B. 30 m²

☐ D. 60 m²



- 6) A refrigerator is set to maintain a temperature of -2°C . It drops $\frac{1}{4}^{\circ}\text{C}$ per hour. What will the temperature be after 8 hours?

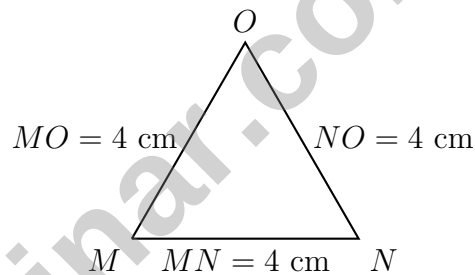
- 7) A rectangular prism has length 12 cm, width 5 cm, and height 3 cm. Which expression correctly represents the volume?

☐ A. $(12 + 5) \times 3$

☐ B. $12 \times 5 \times 3$

☐ C. $2(12 + 5 + 3)$

☐ D. $12 + 5 + 3$



8)

Triangle MNO has all three sides equal: $MN = NO = OM = 4 \text{ cm}$. What are the measures of all angles?

☐ A. $60^{\circ}, 60^{\circ}, 60^{\circ}$

☐ B. $45^{\circ}, 45^{\circ}, 90^{\circ}$

☐ C. $30^{\circ}, 60^{\circ}, 90^{\circ}$

☐ D. Cannot be determined without more info



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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 B is correct.** **(7.G.1-7.G.5)** Angles on a straight line sum to 180° : $35 + 62 + x = 180^\circ$, so $x = 83^\circ$.
- 2) **Choice D is correct.** **(7.G.4-7.G.6)** $C = 2\pi r \Rightarrow 188.4 = 2 \times 3.14 \times r \Rightarrow r = 188.4 \div 6.28 = 30$ cm.
- 3) **Choice C is correct.** **(7.G.4-7.G.6)** $A = 3.14 \times (2.5)^2 = 3.14 \times 6.25 = 19.625$ m².
- 4) **Choice B is correct.** **(7.G.4-7.G.6)** $V = \pi r^2 h \approx 3.14 \times 2^2 \times 4 = 3.14 \times 4 \times 4 = 50.24$ in³.
- 5) **Choice A is correct.** **(7.SP.1-7.SP.4)** Month 1's dots cluster around $71-73^\circ\text{F}$ (x-coordinates 1–3.5 map to $70-75^\circ\text{F}$), a narrow range of 2°F . Month 2's dots span from 71 to 82°F (x-coordinates 1–12, range $\approx 11^\circ\text{F}$). Month 1 is more consistent.
- 6) **Choice C is correct.** **(7.SP.1-7.SP.4)** Comparing month-to-month increases: Feb (+5), Mar (+5), Apr (–2), May (+7), Jun (+5). May's increase from April (18) to May (25) is 7, which is the largest.
- 7) **Choice B is correct.** **(7.SP.5-7.SP.8)** Total coins = $2 + 3 + 5 = 10$. Non-penny coins = $2 + 3 = 5$. $P(\text{not penny}) = \frac{5}{10} = \frac{1}{2}$.
- 8) **Choice A is correct.** **(7.SP.3)** Site X's IQR = $100 - 50 = 50$; Site Y's IQR = $110 - 40 = 70$. Smaller IQR indicates tighter middle-50% spread, so Site X is more consistent.
- 9) **The correct answer is 55.** **(7.NS.1-7.NS.3)** To cancel out the loss of -55 , you add its opposite, which is $+55$. Then $-55 + 55 = 0$ (break even).
- 10) **Choice C is correct.** **(7.SP.5-7.SP.8)** With replacement, the bag is restored to its original state. Each draw has identical probabilities: $P(\text{red}) = \frac{8}{20}$, $P(\text{blue}) = \frac{7}{20}$, $P(\text{green}) = \frac{5}{20}$.
- 11) **Choice D is correct.** **(7.SP.6)** Experimental probability of car use = $\frac{145}{300} \approx 0.483$. Expected in 2400 students: $0.483 \times 2400 \approx 1160$.
- 12) **Choice D is correct.** **(7.SP.1-7.SP.4)** There are 10 values; the median is between the 5th and 6th values, both in stem 4 (45 and 48).
- 13) **Choice B is correct.** **(7.G.4-7.G.6)** True triangle area: $\frac{1}{2} \times 6 \times 3 = 9$ cm². Contractor's estimate: $\frac{1}{2} \times 6 \times 4 = 12$ cm². Overestimate: $12 - 9 = 3$ cm².
- 14) **Choice C is correct.** **(7.G.4-7.G.6)** $V = \frac{1}{2} \times \frac{1}{3} \times 2 = \frac{2}{6} = \frac{1}{3}$ m³.
- 15) **Choice C is correct.** **(7.G.1-7.G.5)** The vertex L may lie anywhere on a line parallel to JK at distance 3 cm above it. Each position yields a different triangle with the same base and height but different side lengths and angles.
- 16) **Choice A is correct.** **(7.SP.5-7.SP.8)** A standard die only has faces 1–6, so rolling a 7 is impossible (probability = 0).
- 17) **Choice B is correct.** **(7.SP.1-7.SP.4)** The differences between 38%, 40%, and 42% demonstrate normal sampling variability. Even though all three are random samples from the same population, each will produce slightly different estimates due to random chance. The true population proportion is likely near these values (around 40%), but exact values vary.
- 18) **Choice D is correct.** **(7.NS.1-7.NS.3)** $2 - 5 = 2 + (-5) = -3$. Check: $A = 7$, $B = -3$, $C = -5$, $D = -9$.
- 19) **Choice D is correct.** **(7.RP.3)** 70% of 80 is $0.70 \times 80 = 56$ students.
- 20) **Choice D is correct.** **(7.RP.3)** Markup amount = $18 - 12 = \$6$. Percent = $\frac{6}{12} \times 100 = 50\%$.
- 21) **The correct answer is A,D.** **(7.RP.1-7.RP.3)** A and D are unit rates because each gives a price per single unit of weight. Option B is a distance, and option C is a total count.
- 22) **Choice B is correct.** **(7.SP.1-7.SP.4)** 8% of 50,000 = $0.08 \times 50,000 = 4000$ users.
- 23) **Choice D is correct.** **(7.RP.1-7.RP.3)** Correct: $\frac{7/10}{1/5} = \frac{7}{10} \times \frac{5}{1} = \frac{35}{10} = \frac{7}{2} = 3.5$ mph. The student multiplied $\frac{7}{10} \times \frac{1}{5} = \frac{7}{50}$ mph, forgetting to reciprocal the divisor fraction.
- 24) **Choice D is correct.** **(7.RP.1-7.RP.3)** Ratios: $12/3 = 4$, $24/6 = 4$, $36/9 = 4$. Constant ratio $k = 4$, so proportional.
- 25) **Choice D is correct.** **(7.RP.1-7.RP.3)** The ratio is $\frac{12}{3} = 4$, $\frac{20}{5} = 4$, $\frac{32}{8} = 4$. The equation is $C = 4g$.
- 26) **The correct answer is $\frac{2}{3}$.** **(7.NS.2)** $-\frac{3}{4} \times (-\frac{8}{9}) = \frac{3 \times 8}{4 \times 9} = \frac{24}{36} = \frac{2}{3}$. Negative times negative is positive.
- 27) **Choice D is correct.** **(7.RP.1-7.RP.3)** The unit-rate point (1, 0.8) shows $k = 0.8$, so the equation is $y = 0.8x$.



A Note for a Careful Thinker

Hi, Careful Thinker!

◇ This carefully paced book gave you four steady Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. This book gave you room to practice the kind of thinking seventh graders need: comparing quantities, analyzing patterns, and organizing information. ◇

★ **Remember this:** The goal was never just to finish pages. The goal was to become the kind of student who knows how to begin, how to adjust, and how to check. ★

Your Careful-Thinking Toolkit

- **Read Twice:** First for the story, second for the math.
- **Label Values:** Give each number a job.
- **Check Signs:** Negatives and inequalities deserve attention.
- **Use Evidence:** Let the work prove the answer.

Grade 7 test-day tip: On test day, underline the question before solving. It keeps your answer aimed at the right target.

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

Jay Daie

Your Math Practice Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **4** 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:

4 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!

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