

6

NEW YORK NYSTP

GRADE

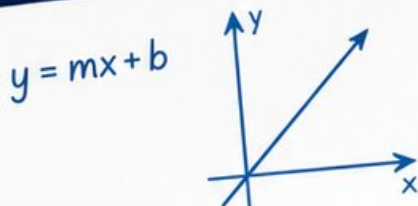
7

MATH

PRACTICE TESTS



Standards Aligned
Problem Solving For
Comprehensive
Assessment Programs



$$2(x - 3) = 4x + 6$$

6 PRINTED TESTS



2 ONLINE TESTS



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



Build
Confidence



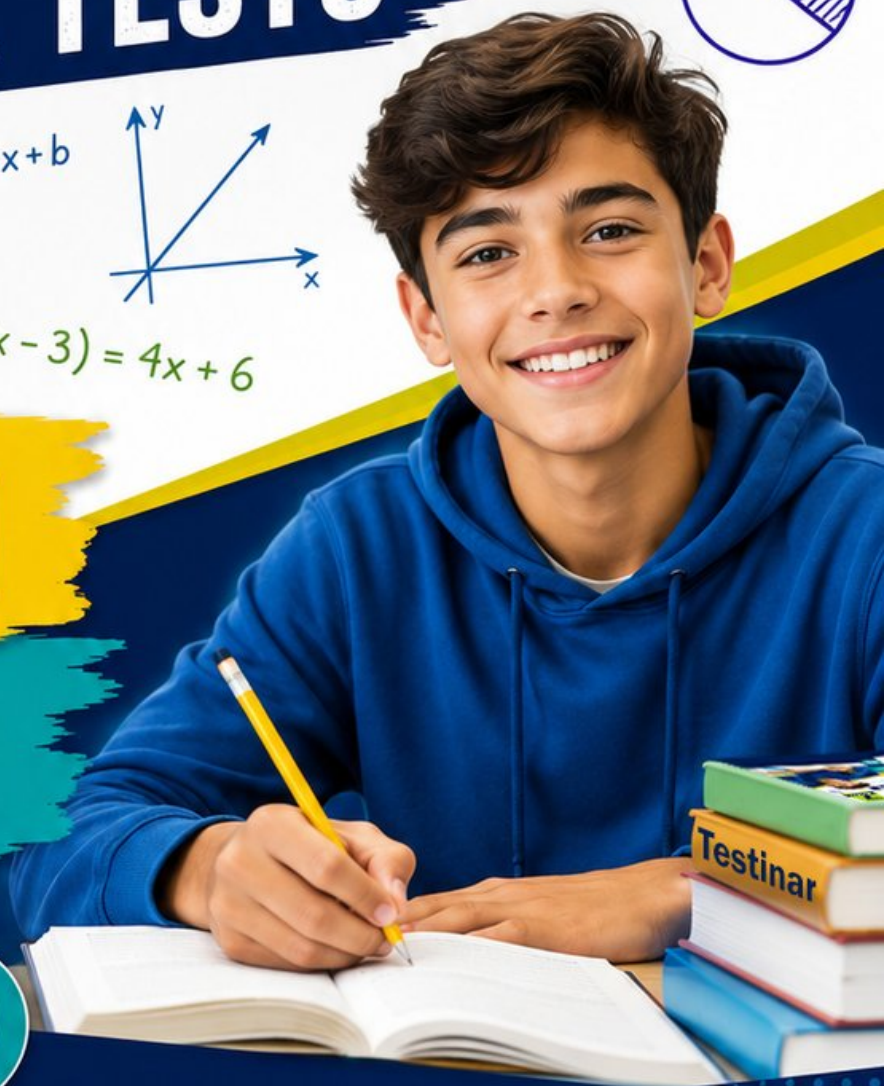
Strengthen
Math Skills



Detailed Answers
& Explanations

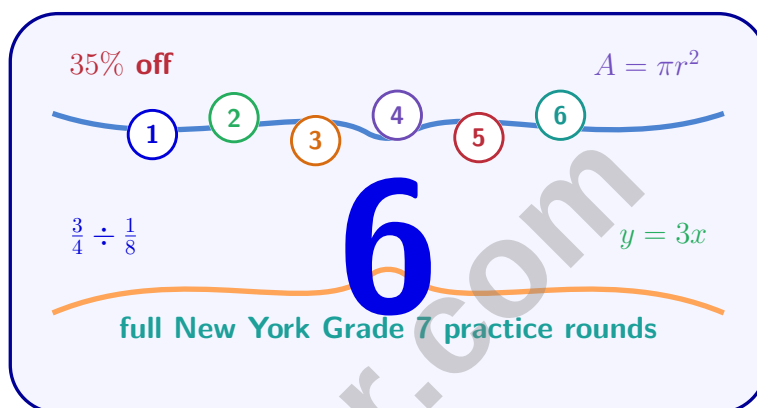


Improve Test
Performance



6 New York NYSTP Grade 7 Math Practice Tests

NYSTP-Aligned Review Practice with Keys and Explanations



Six 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!

Six focused rounds for sharper NYSTP math thinking

This book gives you six 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 six-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?

Six NYSTP tests, 240 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Tests 4–6	Expressions, equations, inequalities, scale drawings, geometry, 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

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	27
★ Practice Test 3	_____	43
★ Practice Test 4	_____	57
★ Practice Test 5	_____	70
★ Practice Test 6	_____	85
Practice Test Answer Keys	_____	101
Practice Test Answers and Explanations	_____	105

1) What is 50% of 180?

☐ A. 60

☐ C. 80

☐ B. 70

☐ D. 90

2) Two stores sell beans at different rates. Which store offers the better price?

Store	Cost	Amount
Store A	\$2	$\frac{1}{2}$ lb
Store B	\$3	$\frac{2}{3}$ lb

☐ A. Store A at \$3.60/lb

☐ C. They cost the same

☐ B. Store B at \$4.50/lb

☐ D. Store A at \$4/lb

3) A delivery service charges an initial fee of \$8 plus \$3 per package. If the total charge is \$26, which equation represents this, where p is the number of packages?

☐ A. $8p + 3 = 26$

☐ C. $3(p + 8) = 26$

☐ B. $3p + 8 = 26$

☐ D. $8 + 26 = 3p$

4) To simulate drawing two marbles from a bag with replacement, which approach correctly models the compound event?

☐ A. Flip a coin twice

☐ D. Spin a spinner twice, returning to all sectors both times

☐ B. Roll a die once

☐ C. Spin a spinner once and remove a sector for the second spin



- 5) A company randomly samples 200 customers from its database of 50,000 customers to estimate customer satisfaction. What is the population in this scenario?
- ☐ A. The 200 customers surveyed ☐ C. All potential customers of the company
- ☐ B. The 50,000 customers in the database ☐ D. The survey responses
- 6) Two coins are flipped. What is the probability that both coins show the same result (either both Heads or both Tails)?
- ☐ A. $\frac{1}{4}$ ☐ C. $\frac{1}{2}$
- ☐ B. $\frac{1}{3}$ ☐ D. $\frac{3}{4}$
- 7) A cylinder has a lateral surface area of 94.2 cm^2 and a radius of 3 cm. What is the height? Use $\pi \approx 3.14$.
- ☐ A. 5 cm ☐ C. 15 cm
- ☐ B. 10 cm ☐ D. 20 cm
- 8) A dataset has a mean of 60 and a median of 65. Where are the outliers likely located?
- ☐ A. On the high end ☐ C. No outliers are present
- ☐ B. On the low end ☐ D. Evenly distributed
- 9) A dot plot shows the number of hours 10 students studied for a math test. The data is: 1, 1, 1, 2, 2, 2, 3, 4, 5. What is the median?
- ☐ A. 1 hour ☐ C. 3 hours
- ☐ B. 2 hours ☐ D. 5 hours



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- 10) A bag holds 30 marbles: 12 are red, 10 are blue, and 8 are green. What is the probability of drawing a marble that is NOT red?
- ☐ A. $\frac{10}{30}$ ☐ C. $\frac{3}{5}$
☐ B. $\frac{16}{30}$ ☐ D. $\frac{2}{5}$
- 11) A die was rolled and outcomes were tallied. The results showed odd numbers (1, 3, 5) appeared a combined 87 times out of 180 rolls. What is the experimental probability of rolling an odd number?
- ☐ A. 0.48 ☐ C. 0.52
☐ B. 0.50 ☐ D. 0.87
- 12) In a school, 30% of students play soccer and 25% play basketball. If 5% play both, what is the probability a student plays soccer OR basketball?
- ☐ A. 0.55 ☐ C. 0.40
☐ B. 0.50 ☐ D. 0.35
- 13) Which value could represent the probability of an event?
- ☐ A. -0.2 ☐ C. 1.5
☐ B. 0.35 ☐ D. 200%
- 14) A student estimated the area of a field to be 550 square meters, but the actual area is 625 square meters. What is the percent error?
- ☐ A. 13.7% ☐ C. 75 square meters
☐ B. 88% ☐ D. 12%



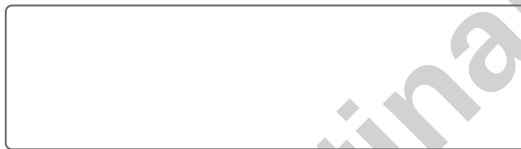
1) To simulate the probability of rolling a sum of 8 or higher with two dice, which initial step is necessary?

- ☐ A. Determine all possible outcomes that satisfy the condition
- ☐ B. Roll the dice only once
- ☐ C. Use only a spinner with 4 sectors
- ☐ D. Assume equal likelihood of all sums

2) Angle P and angle Q are vertical angles. If angle $P = 84^\circ$, what is the measure of angle Q ?

- ☐ A. 6°
- ☐ B. 96°
- ☐ C. 276°
- ☐ D. 84°

3) A histogram displays the ages of people at a gym: 10–20 (8 people), 20–30 (14 people), 30–40 (18 people), 40–50 (12 people), 50–60 (8 people). What is the total number of people at the gym?



4) A student's math score on a pretest was 65 points. On the posttest after tutoring, the score was 78 points. What is the percent increase?

- ☐ A. 13%
- ☐ B. 16.7%
- ☐ C. 20%
- ☐ D. 83.3%



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5) A die is rolled and a spinner with sections Red, Green, Blue is spun. What is the probability of rolling an even number and landing on Red?

- ☐ A. $\frac{1}{6}$
☐ B. $\frac{1}{9}$

- ☐ C. $\frac{1}{4}$
☐ D. $\frac{1}{3}$

6) A pair of fair dice is rolled once. What is the probability of rolling a sum of 7 OR a sum of 11?

- ☐ A. $\frac{6}{36}$
☐ B. $\frac{8}{36}$

- ☐ C. $\frac{2}{36}$
☐ D. $\frac{14}{36}$

7) A coach estimated a player could jump 2.4 meters, but the player jumped 2 meters. What is the percent error?

- ☐ A. 80%
☐ B. 16.7%

- ☐ C. 23.5%
☐ D. 20%

8) Expand: $(3x + 2) \cdot 5$

- ☐ A. $3x + 10$
☐ B. $15x + 10$

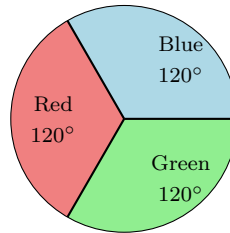
- ☐ C. $15x + 2$
☐ D. $8x + 5$

9) A microfinance organization provides loans at 11% simple interest. If a borrower takes a \$3000 loan to start a business, how much will be owed after 2 years?

- ☐ A. \$3330
☐ B. \$3600

- ☐ C. \$3660
☐ D. \$4200





1)

This spinner has three equal 120° sectors. What is $P(\text{Blue})$?

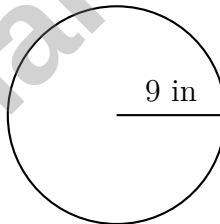
- ☐ A. $\frac{1}{3}$
☐ B. $\frac{1}{4}$

- ☐ C. $\frac{120}{180}$
☐ D. $\frac{2}{5}$

2) A polygon is translated by the vector $(3, -5)$. One vertex of the original polygon is at $(-1, 4)$. Where is this vertex after the translation?

- ☐ A. $(2, -1)$
☐ B. $(4, 9)$

- ☐ C. $(-4, 1)$
☐ D. $(2, 1)$



Radius = 9 in

3)

What is the circumference of this circle? Use $\pi \approx \frac{22}{7}$.

- ☐ A. $\frac{198}{7}$ in
☐ B. $\frac{396}{7}$ in

- ☐ C. $\frac{99}{7}$ in
☐ D. $\frac{792}{7}$ in



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4) A cylinder has a radius of 2.5 m and a volume of 78.5 m^3 . What is the height? Use $\pi \approx 3.14$.

☐ A. 2 m

☐ C. 6 m

☐ B. 4 m

☐ D. 8 m

5) A histogram shows the number of goals scored by soccer teams in a season: 10–20 goals (4 teams), 20–30 goals (6 teams), 30–40 goals (7 teams), 40–50 goals (3 teams). Which interval has the highest frequency?

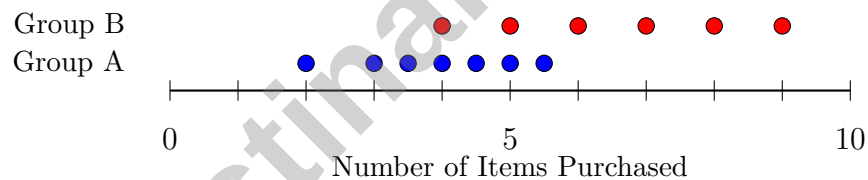
☐ A. 10–20 goals

☐ C. 30–40 goals

☐ B. 20–30 goals

☐ D. 40–50 goals

6) A fair die is rolled. What is the probability of rolling an even number?

☐ A. $\frac{1}{6}$
☐ B. $\frac{2}{6}$
☐ C. $\frac{1}{2}$
☐ D. $\frac{2}{3}$


7)

Looking at the dot plots of items purchased, which statement best describes the overlap?

- ☐ A. Group A typically buys fewer items;
☐ B. Group B always buys more items than Group A
- ☐ C. No overlap exists between the groups
☐ D. Both groups buy identical amounts



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 D is correct.** (7.RP.3) 50% of 180 is $0.50 \times 180 = 90$.
- 2) **Choice D is correct.** (7.RP.1-7.RP.3) Store A: $\frac{2}{1/2} = 2 \times 2 = 4$ dollars/lb. Store B: $\frac{3}{2/3} = 3 \times \frac{3}{2} = 4.5$ dollars/lb. Store A is cheaper.
- 3) **Choice B is correct.** (7.EE.4a) Initial fee is \$8; each package adds \$3. Equation: $3p + 8 = 26$.
- 4) **Choice D is correct.** (7.SP.5-7.SP.8) With replacement means the second selection has the same probability distribution as the first. Spinning twice (not removing) models this.
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) The population is the entire group being studied, which is the complete database of 50,000 customers. The sample is the 200 randomly selected customers.
- 6) **Choice C is correct.** (7.SP.5-7.SP.8) Sample space: HH, HT, TH, TT. Favorable outcomes (same result): HH, TT. Probability: $\frac{2}{4} = \frac{1}{2}$.
- 7) **Choice A is correct.** (7.G.4-7.G.6) Lateral area = $2\pi rh \Rightarrow 94.2 = 2(3.14)(3)(h) \Rightarrow 94.2 = 18.84h \Rightarrow h = 5$ cm.
- 8) **Choice B is correct.** (7.SP.1-7.SP.4) When mean (60) < median (65), low outliers pull the mean down, indicating outliers are likely on the low end.
- 9) **Choice B is correct.** (7.SP.1-7.SP.4) With 10 data points, the median is the average of the 5th and 6th values. Ordered: 1, 1, 1, 2, 2, 2, 3, 4, 5. The 5th and 6th values are both 2, so median = 2 hours.
- 10) **Choice C is correct.** (7.SP.5-7.SP.8) Non-red: $10 + 8 = 18$. $P(\text{not red}) = \frac{18}{30} = \frac{3}{5}$.
- 11) **Choice A is correct.** (7.SP.6) Experimental probability = $\frac{87}{180} \approx 0.483$, which rounds to approximately 0.48.
- 12) **Choice B is correct.** (7.SP.5-7.SP.8) Using $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$: $0.30 + 0.25 - 0.05 = 0.50$.
- 13) **Choice B is correct.** (7.SP.5-7.SP.8) Probability is always between 0 and 1 (inclusive). Only 0.35 fits.
- 14) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|550 - 625|}{625} \times 100\% = \frac{75}{625} \times 100\% = 12\%$.
- 15) **Choice A is correct.** (7.EE.1-7.EE.2) Correct: $-2(x) - 2(-3) = -2x + 6$. Student forgot that negative times negative is positive.
- 16) **Choice D is correct.** (7.RP.3) $412.50 = 1500 \times 0.055 \times t \Rightarrow 412.50 = 82.5t \Rightarrow t = 5$ years.
- 17) **Choice D is correct.** (7.NS.1-7.NS.3) Moving right from -3 by 8 units represents the opposite operation. This is $-3 - (-8) = -3 + 8 = 5$, which is equivalent to moving right.
- 18) **The correct answer is 0.** (7.G.1-7.G.5) Reflection over $y = -x$ uses the rule $(x, y) \rightarrow (-y, -x)$. Applying this to $(2, 0)$: $(2, 0) \rightarrow (-0, -2) = (0, -2)$. The x -coordinate of the image is 0.
- 19) **Choice D is correct.** (7.RP.3) Markup = $0.45 \times 60 = \$27$. Selling price = $60 + 27 = \$87$.
- 20) **The correct answer is B,D.** (7.G.1-7.G.5) B is correct because linear pairs always sum to 180° . D is correct because linear pairs are adjacent angles that form a straight line. A is false because linear pairs are supplementary, not complementary. C is false because vertical angles are opposite angles, not adjacent angles.
- 21) **Choice A is correct.** (7.NS.1b) Combine step-by-step: $-5 + 9 = 4$, then $4 + (-4) = 0$. The negatives and positives cancel out.
- 22) **Choice D is correct.** (7.EE.1) Step 1 correctly identifies the original expression. Step 2 correctly groups and adds: $(4 + 2) = 6$ and $(3 - 1) = 2$. Step 3 correctly shows the simplified form: $6x + 2y$.
- 23) **The correct answer is 40.** (7.G.1-7.G.5) Perimeter scales linearly by the scale factor. Larger perimeter = $16 \times 2.5 = 40$ inches.
- 24) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of coefficients 30, 18, 6 is 6. Factor: $30x - 18y + 6 = 6(5x - 3y + 1)$.
- 25) **Choice C is correct.** (7.EE.4b) Check: $5 + 6 = 11 > 10$ ✓. The other values yield 9, 10, and 8, which do not satisfy the inequality.
- 26) **Choice B is correct.** (7.SP.1-7.SP.4) $54^\circ \div 360^\circ \times 100 = 15\%$.
- 27) **Choice B is correct.** (7.NS.1-7.NS.3) Division by a fraction equals multiplication by the reciprocal.
- 28) **Choice C is correct.** (7.NS.2d) Divide $3 \div 11 = 0.272727 \dots = 0.\overline{27}$. The denominator 11 produces a repeating 2-digit block.



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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 6 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 **6** 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:

6 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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