

10

New York NYSTP

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned Problem
Solving For Comprehensive
Assessment Programs



10 PRINTED TESTS

Realistic practice to build
confidence and mastery



2 ONLINE TESTS

Extra practice for
continued success



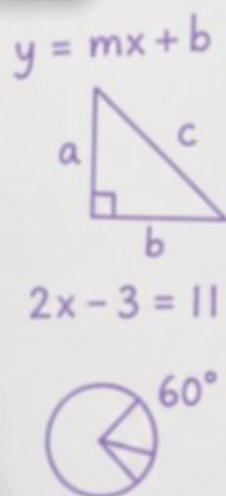
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 New York NYSTP Grade 7 Math Practice Tests

New York Grade 7 NYSTP Practice for fast-moving review across proportional relationships, algebra, measurement, statistics, and chance



Ten 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



Copyright ©

Testinar Inc



Published by Testinar Inc

Testinar.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



Copyright ©

Welcome, New York Grade 7 Problem Solver!

Ten focused rounds for sharper New York NYSTP math thinking

This book gives you ten 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 ten-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?

Ten New York NYSTP tests, 400 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.
Tests 7–9	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
Test 10	A final New York round to show growth across the whole book.
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.



Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	11
★ Practice Test 2	_____	26
★ Practice Test 3	_____	41
★ Practice Test 4	_____	55
★ Practice Test 5	_____	70
★ Practice Test 6	_____	85
★ Practice Test 7	_____	99
★ Practice Test 8	_____	115
★ Practice Test 9	_____	129
★ Practice Test 10	_____	145
Practice Test Answer Keys	_____	160
Practice Test Answers and Explanations	_____	166

1) A trapezoid with one vertex at $D(-2, -4)$ is rotated 180° about the origin. What is the image of vertex D ?

☐ A. $(2, 4)$
☐ C. $(4, 2)$
☐ B. $(-2, 4)$
☐ D. $(-4, -2)$

2) A square tile has an area of 169 square inches. What is the side length of the tile?

☐ A. 11 inches

☐ C. 13 inches

☐ B. 12 inches

☐ D. 14 inches

3) Simplify: $\left(\frac{x^4}{x^2}\right)^3$

☐ A. x^6
☐ C. x^{18}
☐ B. x^9
☐ D. x^{12}

4) A bag contains 35 marbles. The probability of drawing a specific color is $\frac{5}{7}$. How many marbles of that color are in the bag?

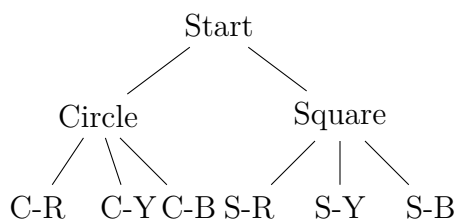
☐ A. 5

☐ C. 25

☐ B. 15

☐ D. 30

5) A tree diagram shows all outcomes for selecting a shape (Circle or Square) and a color (Red, Yellow, or Blue). How many final branches should the tree have?


☐ A. 2 branches

☐ C. 5 branches

☐ B. 3 branches

☐ D. 6 branches


Scan me!
For more practice
& answers

- 6) A researcher rolled a number cube 500 times and recorded the results:

Face	1	2	3	4	5	6
Times	82	88	79	85	90	96

Which face has an experimental probability closest to the theoretical probability of $\frac{1}{6}$?

- ☐ A. Face 1 ☐ C. Face 5
☐ B. Face 3 ☐ D. Face 6
- 7) A bicycle wheel has diameter 0.6 meters. If the bike travels 30 meters, how many complete rotations did the wheel make? Use $\pi \approx 3.14$, round to the nearest whole number.

- 8) Two cards are drawn from a standard 52-card deck WITH replacement. What is the probability of drawing a heart on the first draw AND a spade on the second draw?

- ☐ A. $\frac{1}{16}$ ☐ C. $\frac{1}{4}$
☐ B. $\frac{1}{13}$ ☐ D. $\frac{1}{8}$

- 9) A cylindrical water tank has a radius of 2.5 meters and a height of 8 meters. Find the volume of the tank in cubic meters. Use $\pi \approx 3.14$.



10) A student created a stem-and-leaf plot of plant heights (cm):

Stem	Leaves
8	2, 5, 9
9	1, 4, 6, 8
10	0, 3, 5, 7

A plant with height 94 cm was accidentally recorded as 49 cm. After correction, what is the new maximum?

- ☐ A. 94 ☐ C. 98
☐ B. 107 ☐ D. 105

11) Which pair correctly matches likelihood terms with their probabilities?

- ☐ A. Impossible = 0.5, Certain = 0.5 ☐ C. Impossible = -1, Certain = 2
☐ B. Impossible = 0, Certain = 1 ☐ D. Impossible = 1, Certain = 0

12) An artist estimated she would use 16 ounces of paint but used 20 ounces. What is the percent error?

- ☐ A. 25% ☐ C. 4%
☐ B. 80% ☐ D. 20%

13) Expand: $-1(2x - 8)$

- ☐ A. $-2x - 8$ ☐ C. $-2x + 8$
☐ B. $2x - 8$ ☐ D. $2x + 8$



Scan me!
For more practice
& answers

- 1) A museum surveyed 105 visitors and found 35 were children. The museum expects 3150 visitors this month. About how many are expected to be children?
- ☐ A. 700 ☐ C. 1050
☐ B. 875 ☐ D. 1225
- 2) Two dot plots display the number of glasses of water consumed per day by two fitness groups. Athletic Group: 6, 7, 7, 8, 8, 8, 8, 9 glasses; Casual Group: 2, 3, 4, 8, 9, 10 glasses. Which group shows more consistent hydration behavior?
- ☐ A. Athletic Group (centered at 8 glasses, range 3) ☐ C. Both groups have identical patterns
☐ B. Casual Group (some very low values up to 10) ☐ D. Casual Group (includes higher values)
- 3) A triangular prism has volume 126 cubic inches. If the triangular base has area 18 in², what is the height of the prism?
- ☐ A. 7 in ☐ C. 9 in
☐ B. 8 in ☐ D. 144 in
- 4) Which set of conditions does NOT uniquely determine a triangle?
- ☐ A. Three side lengths given ☐ C. Two side lengths and an angle NOT between them
☐ B. Two side lengths and the angle between them given ☐ D. Two angles and any side length given



5) Expand: $-2(x + 4)$

☐ A. $-2x - 8$

☐ B. $-2x + 8$

☐ C. $2x - 8$

☐ D. $-2x + 4$

6) Identify which pair are NOT like terms.

☐ A. $6a^2$ and $9a^2$

☐ B. $5x$ and $5x^2$

☐ C. $-3y$ and $4y$

☐ D. $2mn$ and mn

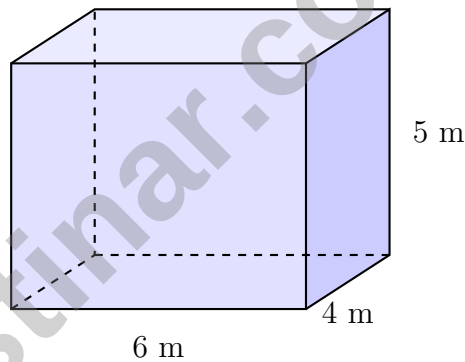
7) What is the GCF of $6xy$ and $9y$?

☐ A. $3y$

☐ B. $6y$

☐ C. $9y$

☐ D. $3xy$



8)

An isometric rectangular prism with dimensions $6\text{ m} \times 5\text{ m} \times 4\text{ m}$ is shown. Determine the surface area.

☐ A. 120 m^2

☐ B. 148 m^2

☐ C. 166 m^2

☐ D. 240 m^2



Scan me!
For more practice
& answers

- 1) An investment account has an initial balance of \$2,000. At the end of Year 1, it grows to \$2,100. What percent did it grow?
- ☐ A. 5% ☐ C. 15%
- ☐ B. 10% ☐ D. 20%
- 2) Simplify: $(9r + 4) - (6r + 1)$
- ☐ A. $3r + 3$ ☐ C. $15r + 3$
- ☐ B. $3r + 5$ ☐ D. $3r - 3$
- 3) If $2^n = 32$, what is the value of n ?
- ☐ A. 4 ☐ C. 6
- ☐ B. 5 ☐ D. 8
- 4) A car rental company charges a base fee of \$45 and then \$0.25 per mile. Which equation represents the total cost C for m miles?
- ☐ A. $C = 45m + 0.25$ ☐ C. $C = 45(m + 0.25)$
- ☐ B. $C = 0.25m + 45$ ☐ D. $C = (45 + m)(0.25)$
- 5) Which solution is correct for $3x + 6 = 15$?
- ☐ A. $x = 1$ ☐ C. $x = 5$
- ☐ B. $x = 3$ ☐ D. $x = 7$
- 6) A temperature drops by 8°C and reaches -2°C . What was the starting temperature? Check reasonableness.
- ☐ A. -10°C ☐ C. 10°C
- ☐ B. 6°C ☐ D. 15°C



Scan me!
For more practice
& answers

7) A photograph is scaled down by a factor of $\frac{1}{4}$. If the original photograph is 8 inches wide, what is the width of the scaled version?

- ☐ A. 1 inch
☐ B. 2 inches

- ☐ C. 4 inches
☐ D. 6 inches

8) A rectangular sports field is 150 m by 100 m. A scale drawing is made at 1 cm : 25 m. What are the dimensions of the drawing?

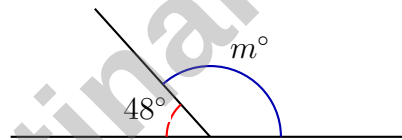
- ☐ A. 6 cm by 4 cm
☐ B. 15 cm by 10 cm

- ☐ C. 25 cm by 16 cm
☐ D. 60 cm by 40 cm

9) Which type of cut through a rectangular prism will produce a triangular cross-section?

- ☐ A. A cut perpendicular to the base
☐ B. A cut from a vertex through a point on an opposite edge
☐ C. A cut parallel to the base
☐ D. A cut perpendicular to an edge

10)



Two rays extend from a point on a line. The angle on the left is 48° and on the right is m . These form a linear pair. Find m .

- ☐ A. 48°
☐ B. 90°

- ☐ C. 132°
☐ D. 228°



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.

Testinar.com



Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (7.G.1-7.G.5) A 180° rotation maps $(x, y) \rightarrow (-x, -y)$. So $(-2, -4) \rightarrow (2, 4)$.
- 2) **Choice C is correct.** (7.NS.1-7.NS.3) Since $\text{area} = s^2$ and $169 = 13^2$, the side length is $\sqrt{169} = 13$ inches.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) First simplify inside parentheses: $\frac{x^4}{x^2} = x^{4-2} = x^2$. Then apply power rule: $(x^2)^3 = x^{2 \times 3} = x^6$.
- 4) **Choice C is correct.** (7.SP.5-7.SP.8) $\frac{5}{7} \times 35 = \frac{5 \times 35}{7} = \frac{175}{7} = 25$.
- 5) **Choice D is correct.** (7.SP.5-7.SP.8) Each of the 2 shapes branches into 3 color outcomes. Total: $2 \times 3 = 6$ final branches.
- 6) **Choice B is correct.** (7.SP.6) Face 3: $\frac{79}{500} = 0.158$. Theoretical: $\frac{1}{6} \approx 0.167$. Difference: $|0.158 - 0.167| \approx 0.009$, smallest among all faces.
- 7) **The correct answer is 16.** (7.G.4-7.G.6) Circumference $= \pi d = 3.14 \times 0.6 = 1.884$ m. Rotations $= 30 \div 1.884 \approx 16$.
- 8) **Choice A is correct.** (7.SP.5-7.SP.8) With replacement: $P(\text{heart}) \cdot P(\text{spade}) = \frac{1}{4} \cdot \frac{1}{4} = \frac{1}{16}$.
- 9) **The correct answer is 157.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times (2.5)^2 \times 8 = 3.14 \times 6.25 \times 8 = 157 \text{ m}^3$.
- 10) **Choice B is correct.** (7.SP.1-7.SP.4) After removing 49 from stem 4 and correcting to 94 in stem 9, the maximum becomes 107 (stem 10, leaf 7).
- 11) **Choice B is correct.** (7.SP.5-7.SP.8) By definition, an impossible event has probability 0 and a certain event has probability 1.
- 12) **Choice D is correct.** (7.RP.3) Percent error $= \frac{|16-20|}{20} \times 100\% = \frac{4}{20} \times 100\% = 20\%$.
- 13) **Choice C is correct.** (7.EE.1-7.EE.2) Distribute -1 : $-1(2x) - 1(-8) = -2x + 8$. This is equivalent to subtracting the entire expression.
- 14) **Choice D is correct.** (7.RP.3) At 5 years: $I = 4500(0.055)(5) = \$1237.50$, so $A = \$5737.50$. At 3 years: $I = 4500(0.055)(3) = \$742.50$, so $A = \$5242.50$. Difference: $5737.50 - 5242.50 = \$495$.
- 15) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply each dimension by 0.75: $8 \times 0.75 = 6$ inches; $10 \times 0.75 = 7.5$ inches.
- 16) **Choice D is correct.** (7.RP.3) A 20% increase of \$40 is $0.20 \times 40 = 8$ dollars.
- 17) **Choice D is correct.** (7.RP.3) Selling price $= \text{cost} \times 1.30$. So $84 = \text{cost} \times 1.30$, giving $\text{cost} = 84 \div 1.30 \approx \64.62 .
- 18) **The correct answer is A,B.** (7.G.4-7.G.6) A is correct: volume $V = B \times h$ for any prism. B is correct: $V = 4^3 = 64 \text{ cm}^3$. C is false: doubling height doubles volume, not triples it. D is false: a triangular prism can have larger volume than a rectangular prism depending on dimensions.
- 19) **Choice A is correct.** (7.NS.1b) Subtract the smaller absolute value from the larger: $|12| - |-5| = 12 - 5 = 7$. The larger absolute value is positive, so the answer is 7.
- 20) **Choice A is correct.** (7.EE.1) x terms: $3x + 5x - 2x = (3 + 5 - 2)x = 6x$. y terms: $4y + y - 3y = (4 + 1 - 3)y = 2y$. Result: $6x + 2y$.
- 21) **Choice A is correct.** (7.EE.1-7.EE.2) The rectangle has width $2x + 3$. For area $6x + 9$, height must be 3. This is the GCF.
- 22) **Choice C is correct.** (7.SP.1-7.SP.4) $216^\circ \div 360^\circ \times 100 = 60\%$.
- 23) **The correct answer is 120.** (7.SP.1-7.SP.4) The sample size is the number of individuals surveyed. In this case, 120 adults were randomly selected and surveyed, so the sample size is 120.
- 24) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $7 - 3(-2) = 7 + 6 = 13$.
- 25) **Choice A is correct.** (7.EE.4b) "A number plus 8" translates to $x + 8$, and "is less than" translates to $<$.
- 26) **Choice A is correct.** (7.RP.1-7.RP.3) The unit-rate point $(1, 0.8)$ represents the rate at 1 hour, so the hourly rate is \$0.80 per hour. Option B (\$1.60) is a distractor for students who double the marked value.
- 27) **Choice C is correct.** (7.NS.1-7.NS.3) Common denominator 6: $-\frac{4}{6} - \frac{5}{6} = -\frac{9}{6} = -\frac{3}{2} = -1\frac{1}{2}$.
- 28) **Choice B is correct.** (7.NS.1-7.NS.3) $\frac{1}{5} \div \frac{1}{3} = \frac{1}{5} \times \frac{3}{1} = \frac{3}{5}$.
- 29) **Choice D is correct.** (7.NS.2d) Divide $3 \div 4 = 0.75$. The denominator is 2^2 , which divides evenly.



Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

★ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ★

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

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

Jay Daie

Your Math Hero Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra 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:

10 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answer 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



Stronger Math Skills

Build a solid foundation through targeted practice and review.



Better Problem Solving

Develop logical thinking and effective solution strategies.



Deeper Understanding

Reinforce key concepts with clear explanations and meaningful practice.



Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

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



2 EXTRA 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!



VISIT **TESTINAR.COM/MATH7**
FOR MORE PRACTICE TESTS
AND LEARNING RESOURCES.



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED