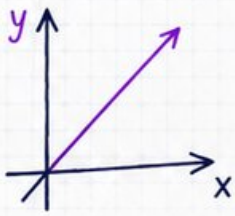
3 New York NYSTP

GRADE 7 MATH

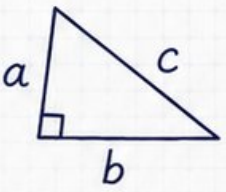
PRACTICE TESTS

- Standards Aligned
- Problem Solving
- For Comprehensive Assessment Programs



$y = mx + b$

$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$



$3(x-2) = 2x+5$

3 PRINTED TESTS

2 ONLINE TESTS

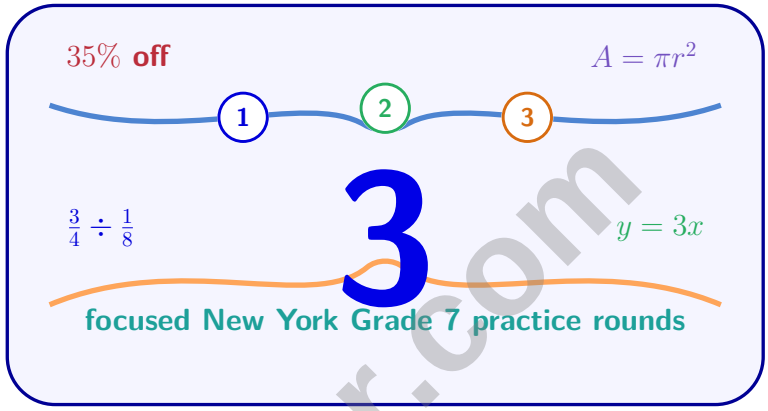
USE THESE TWO ADDITIONAL ONLINE PRACTICE TESTS

FOR EXTRA REVIEW AFTER THE PRINTED TESTS IN THIS BOOK.

- Build Confidence
- Strengthen Math Skills
- Detailed Answers & Explanations
- Improve Test Performance

3 New York NYSTP Grade 7 Math Practice Tests

Three New York Practice Tests with Review and Full Solutions



Three 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!

Three focused rounds for sharper NYSTP math thinking

This book gives you three 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.

How to Use This Book

A three-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?

Three NYSTP tests, 120 questions, and a focused review path

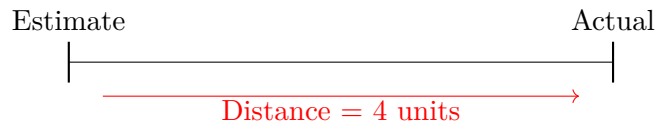
Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Test 3	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
Answer Pages	Compact keys and explanations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

Table of Contents

1) A freezer temperature drops from 0°C to −30°C over 10 hours. What is the average temperature drop per hour?

☐ A. 30°C per hour
☐ B. −3°C per hour
☐ C. 3°C per hour
☐ D. −30°C per hour



2) **Measurement Error Diagram**

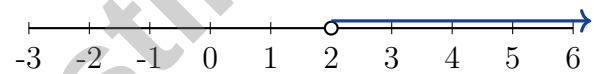
An estimate is 6 meters and the actual is 10 meters. What is the percent error?

☐ A. 40%
☐ B. 60%
☐ C. 66.7%
☐ D. 4%

3) Expand and simplify: $5(x-2)+3(x+4)$

☐ A. $8x+22$
☐ B. $8x+12$
☐ C. $5x+7$
☐ D. $8x+2$

4) On a number line, which correctly represents $q > 2$?



☐ A. Closed circle at 2 pointing right
☐ B. Open circle at 2 pointing left
☐ C. Open circle at 2 pointing right
☐ D. Closed circle at 2 pointing left

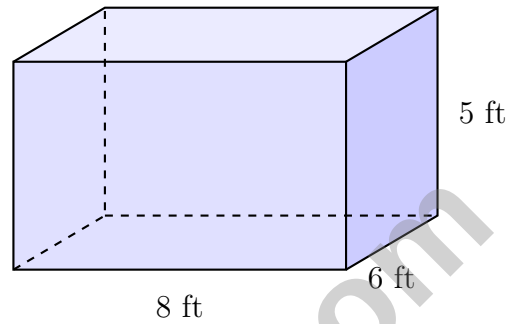
5) A teacher invests $5000 in a savings bond at 2.5% simple interest per year. What is the total amount (principal plus interest) after 8 years?

☐ A. $5625
☐ B. $5750
☐ C. $6000
☐ D. $6250

6) A city planner wants to find the actual distance between two landmarks from a map. The map scale is 1 cm : 0.5 km. The distance on the map is 8 cm. What is the actual distance?

☐ A. 0.5 km
☐ B. 0.0625 km
☐ C. 16 km
☐ D. 4 km

7)



A rectangular prism has dimensions 8 ft × 5 ft × 6 ft. Find the total surface area.

☐ A. 120 ft^2
☐ B. 236 ft^2
☐ C. 240 ft^2
☐ D. 480 ft^2

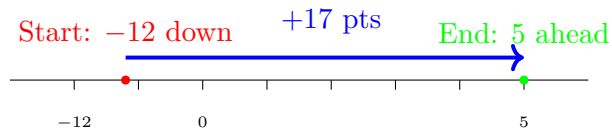
8) A factory produced 500 items. If 18% were defective, how many defective items were there?

☐ A. 70
☐ B. 80
☐ C. 90
☐ D. 100

9) A dress is on sale for $36 after a 40% markdown. What was the original selling price?

☐ A. $56.40
☐ B. $86.40
☐ C. $50
☐ D. $60

10) In a game, Team A was down 12 points (represented as -12). They scored 17 points. How many points ahead are they now?



☐ A. -29 points
☐ B. -5 points
☐ C. 5 points
☐ D. 29 points

11) Which group shows ALL the like terms in the expression $5a + 3b + 7a + 2c + 8b$?

☐ A. $3b$ and $8b$
☐ B. $2c$ and $5a$
☐ C. $5a$ and $7a$
☐ D. $5a$, $7a$, $3b$, and $8b$

12) If the area of a rectangle is $18x + 27$ square units and the width is 9 units, what is the length?

☐ A. $2x + 3$
☐ B. $2x + 27$
☐ C. $18x$
☐ D. $18x + 27$

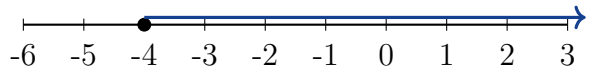
13) Which inequality represents "a number is more than twice itself minus 5"?

☐ A. $n > 2n - 5$
☐ B. $n > 2n + 5$
☐ C. $2n > n - 5$
☐ D. $n + 5 > 2n$

14) A coin is flipped 100 times. Heads appears 48 times. Based on this simulation, which is the estimated probability of flipping heads?

☐ A. 0.40
☐ B. 0.48
☐ C. 0.50
☐ D. 0.52

1) Identify the inequality.

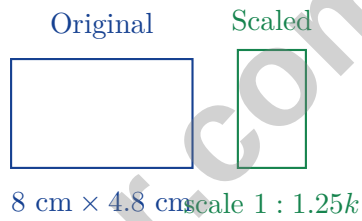


☐ A. $x < -4$
☐ B. $x > -4$
☐ C. $x \leq -4$
☐ D. $x \geq -4$

2) Which scale would make the drawing *larger* than the actual object?

☐ A. 1 in : 10 ft
☐ B. 1 in : 5 ft
☐ C. 2 in : 1 ft
☐ D. 1 in : 100 ft

3)



A scale drawing of a rectangular room is 8 cm × 4.8 cm. The drawing is enlarged proportionally so the new dimensions are 10 cm × 6 cm. If the original scale was 1 cm : 5 m, what is the scale of the enlarged drawing?

☐ A. 1 cm : 4 m
☐ B. 1 cm : 6.25 m
☐ C. 1 cm : 3.125 m
☐ D. 1 cm : 2.5 m

4) A business's profit increased from \$12 000 to \$16 800. What is the percent increase in profit?

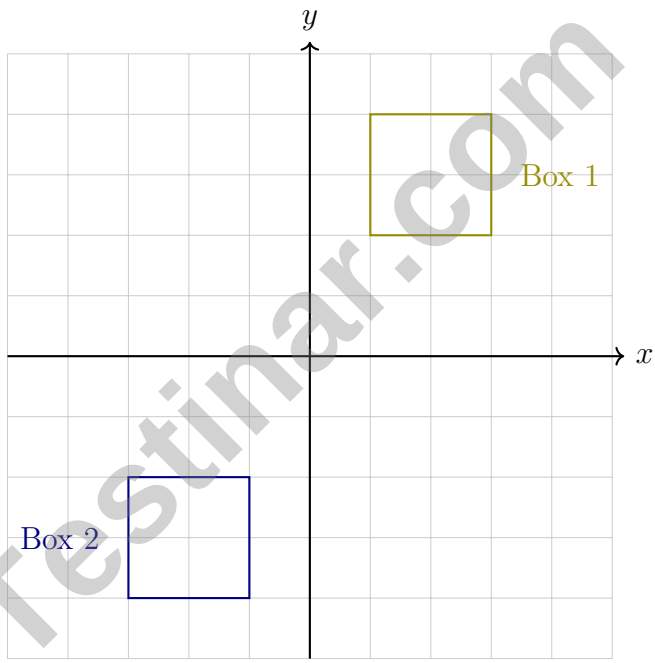
5) A cone with base radius r and height h is cut horizontally at height $\frac{h}{3}$ from the base. The radius of the circular cross-section is:

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

6) If an angle measures $29°$, what is the measure of an angle supplementary to it?

☐ A. $29°$
☐ B. $61°$
☐ C. $151°$
☐ D. $209°$

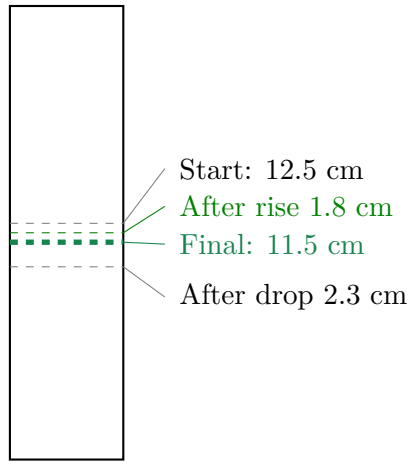
7)



Box 1 is transformed to Box 2. Identify the transformation.

☐ A. Translation by $(-2, -4)$
☐ B. Rotation of $180°$ about the origin
☐ C. Reflection over the origin (same as $180°$ rotation)
☐ D. Reflection over the line $y = -1$

1)



A scientist tracks a liquid level in a container. Starting at 12.5 cm, the level drops 2.3 cm, rises 1.8 cm, then drops 0.5 cm. What is the final level?

☐ A. 11.5 cm
☐ B. 10.5 cm
☐ C. 12.8 cm
☐ D. 9.0 cm

2) A biased spinner has $P(\text{Win}) = 0.75$. If you spin once, what is $P(\text{Lose})$?

☐ A. 0.25
☐ B. 0.75
☐ C. 0.5
☐ D. -0.25

3) A real estate agent earns a 2.5% commission on home sales. She sells a house for $\$400,000$. How much is her commission?

☐ A. $\$6,000$
☐ B. $\$40,000$
☐ C. $\$12,500$
☐ D. $\$10,000$

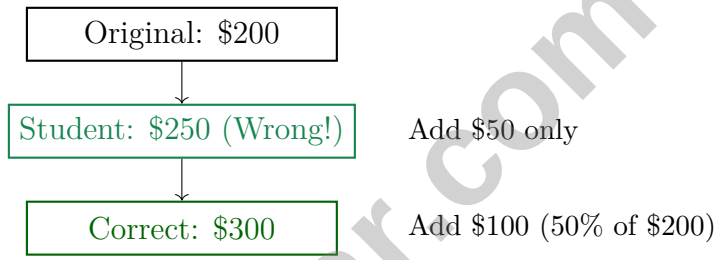
4) A loan calculator shows that borrowing \$8 000 at 6% interest for 3 years costs \$1 440 in total interest. Approximately how much is paid back in total?

☐ A. \$6 560
☐ B. \$7 440
☐ C. \$8 000
☐ D. \$9 440

5) Brianna deposits \$1,000 in an account earning 10% interest compounded annually. What is the balance after 2 years?

☐ A. \$1,100
☐ B. \$1,200
☐ C. \$1,210
☐ D. \$1,220

6)



A student made an error. She claimed that a \$200 item with a 50% increase costs \$250. What is her mistake?

☐ A. She forgot to calculate 50% of the original price correctly.
☐ B. The answer is actually correct.
☐ C. She used the new price as the base for the percent, not the original.
☐ D. She computed 50% of \$200 as \$50 instead of \$100.

7) A rectangular prism has surface area 250 cm^2. If length = 10 cm and width = 5 cm, what is the height?

☐ A. 5 cm
☐ B. 10 cm
☐ C. 7.5 cm
☐ D. 12.5 cm

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.

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice B is correct.** 7.NS.1-7.NS.3 Change: $-30 - 0 = -30°$C. Rate: $(-30) \div 10 = -3°$C/hour.
2) **Choice A is correct.** 7.RP.3 Percent error $= \frac{|6-10|}{10} \times 100\% = \frac{4}{10} \times 100\% = 40\%$.
3) **Choice D is correct.** 7.EE.1-7.EE.2 Expand: $5x - 10 + 3x + 12 = 8x + 2$. Combine like terms.
4) **Choice C is correct.** 7.EE.4b $q > 2$ uses an open circle (strict inequality) and points right toward larger values.
5) **Choice C is correct.** 7.RP.3 $I = 5000 \times 0.025 \times 8 = \$1000$. $A = 5000 + 1000 = \$6000$.
6) **Choice D is correct.** 7.RP.1-7.RP.3 Multiply: $8 \times 0.5 = 4$ km.
7) **Choice B is correct.** 7.G.4-7.G.6 $SA = 2(8 \cdot 5 + 8 \cdot 6 + 5 \cdot 6) = 2(40 + 48 + 30) = 2(118) = 236$ ft^2.
8) **Choice C is correct.** 7.RP.3 18% of 500 is $0.18 \times 500 = 90$ items.
9) **Choice D is correct.** 7.RP.3 Sale price = original $\times 0.60$. So $36 =$ original $\times\, 0.60$, giving original $= 36 \div 0.60 = \$60$.
10) **Choice C is correct.** 7.NS.1b Team A's score changes by: $-12 + 17 = 5$. They are now 5 points ahead.
11) **Choice D is correct.** 7.EE.1 Like terms share the same variable. The pairs are: $(5a, 7a)$ and $(3b, 8b)$. The term $2c$ has no like terms in this expression.
12) **Choice A is correct.** 7.EE.1-7.EE.2 Factor: $18x + 27 = 9(2x + 3)$. Length $= \frac{9(2x+3)}{9} = 2x + 3$.
13) **Choice A is correct.** 7.EE.4b "A number" is n; "is more than" is $>$; "twice itself minus 5" is $2n - 5$. Direct translation: $n > 2n - 5$.
14) **Choice B is correct.** 7.SP.5-7.SP.8 Relative frequency from the simulation is $\frac{48}{100} = 0.48$, which estimates the probability.
15) **Choice C is correct.** 7.EE.1-7.EE.2 Substitute: $3(2 + (-3)) = 3(-1) = -3$.
16) **Choice A is correct.** 7.EE.1-7.EE.2 Distribute the negative: $2s - 10 - s + 3 = (2s - s) + (-10 + 3) = s - 7$.
17) **Choice C is correct.** 7.EE.3-7.EE.4 Multiply by 2: $x - 4 = 10$. Add 4: $x = 14$.
18) **The correct answer is B,D.** 7.SP.1-7.SP.4 Total is $280 + 420 + 100 = 800$. Online: $280/800 = 0.35 = 35\%$, so B is correct. In-store: $420/800 = 0.525 = 52.5\%$, so D is correct. A is wrong (not exactly 50%). C is wrong ($100/800 = 12.5\%$, not 10%).
19) **Choice C is correct.** 7.G.1-7.G.5 Cross-multiply: $8x = 12 \times 6 = 72$, so $x = \frac{72}{8} = 9$.
20) **Choice A is correct.** 7.SP.1-7.SP.4 The phrase "much better" is leading language that suggests a positive comparison, biasing respondents toward agreeing. A neutral question would ask if there is a difference without suggesting which is better.
21) **Choice B is correct.** 7.SP.5-7.SP.8 Digits: 10 (0–9); letters: 26 (A–Z). Total: $10 \times 26 = 260$ possible codes.
22) **Choice D is correct.** 7.RP.1-7.RP.3 A proportional relationship has the form $y = kx$ and passes through $(0, 0)$. The equation $y = 0.5x + 3$ includes the added constant $+3$, so it has a y-intercept of 3 and is linear but not proportional.
23) **Choice D is correct.** 7.RP.1-7.RP.3 Unit price $= \$91 \div 7 = \$13$ per item.
24) **The correct answer is -150 .** 7.NS.1-7.NS.3 The elevation change is $200 - 350 = -150$. She is now 150 meters below sea level.
25) **Choice C is correct.** 7.RP.3 Set up $\frac{16}{20} = \frac{p}{100}$. Simplifying: $\frac{16}{20} = \frac{4}{5} = \frac{80}{100} = 80\%$.
26) **Choice D is correct.** 7.RP.3 Total $= \$500 + (6\% \times \$500) = \$500 + \$30 = \$530$.
27) **Choice B is correct.** 7.NS.1-7.NS.3 Find a common denominator: $-\frac{3}{4} + \frac{2}{4} = -\frac{1}{4}$.
28) **The correct answer is $\frac{4}{3}$.** 7.RP.1-7.RP.3 If $\frac{1}{2}$ job takes $\frac{2}{3}$ hour, then 1 full job takes $\frac{2}{3} \times 2 = \frac{4}{3}$ hours.
29) **Choice A is correct.** 7.NS.2d Both $0.8 = \frac{8}{10} = \frac{4}{5}$ (in simplest form). The answer is A, the fully simplified fraction.
30) **Choice A is correct.** 7.NS.1-7.NS.3 Total loss: $-45.75 \times 6 = -274.50$ dollars.
31) **Choice C is correct.** 7.NS.1-7.NS.3 $12^2 = 144$ and $13^2 = 169$. Since $144 < 150 < 169$, we have $12 < \sqrt{150} < 13$.
32) **Choice A is correct.** 7.NS.1-7.NS.3 Depth $= -2.25 \times 8 = -18$ m (18 meters below sea level).
33) **Choice B is correct.** 7.NS.1-7.NS.3 $2.5 \times 10^{-3} = 2.5 \times 0.001 = 0.0025$. Move decimal 3 places left.

Author's Note

The Power of Showing Work

Hi, Organized Solver!

◇ You practiced Grade 7 skills that often require more than one step. That means your written work matters. ◇

⋆ **Remember this:** Showing work is not extra. It is how you track your thinking, find errors, and prove that your answer did not happen by luck. You practiced across 3 full Grade 7 practice tests, and that repeated effort matters. ⋆

Organized Work Habits

- **One Line Per Step:** Keep the path readable.
- **Box the Answer:** Make the final result easy to find.
- **Use Labels:** Tell what each value represents.
- **Check the Path:** Follow your steps backward if needed.

Grade 7 test-day tip: When a problem has several steps, write less on each line. Space makes checking easier.

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

Jay Daie

Your Organized-Work Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **3** 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:

- **3** 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.

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Build Confidence
Practice regularly to feel prepared and test-ready.

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Detailed Answers & Explanations
Learn from clear explanations and step-by-step solutions.

Improve Test Performance
Apply your knowledge and achieve your best score!

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- The Number System
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- Statistics & Probability
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- Measurement & Conversions
- Algebraic Thinking
- And More!

2 ONLINE TESTS

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2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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