

7 New York NYSTP Grade 7 Math Practice Tests



7 PRINTED TESTS + 2 ONLINE TESTS

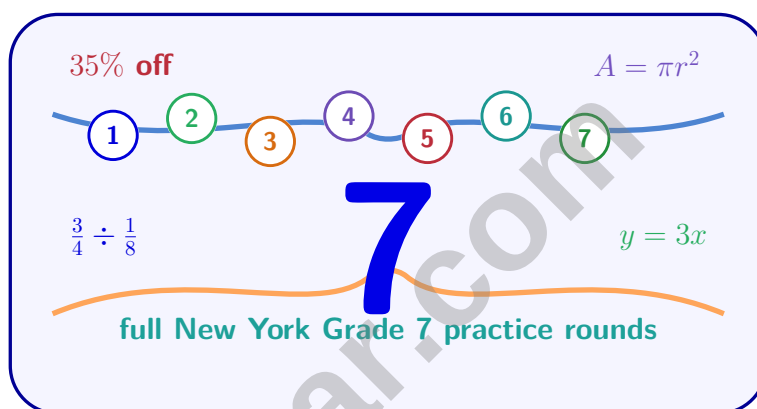


**Standards Aligned Problem Solving
For Comprehensive Assessment Programs**



8 New York NYSTP Grade 7 Math Practice Tests

A skill-first tour of New York Grade 7 proportional graphs, expressions, inequalities, geometry, box plots, and probability



Eight 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.

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Welcome, New York Grade 7 Problem Solver!

Eight focused rounds for sharper NYSTP math thinking

This book gives you seven 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

An eight-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?

Eight NYSTP tests, 280 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 7–8	Statistics, probability, mixed review, stamina, and choosing efficient strategies.
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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1) Compare the interest earned on \$1,000 over 3 years at 6% simple vs. compound interest. The compound interest earns approximately how much more?

- ☐ A. \$0 (they are the same) ☐ C. \$11.02
☐ B. \$10.42 ☐ D. \$180

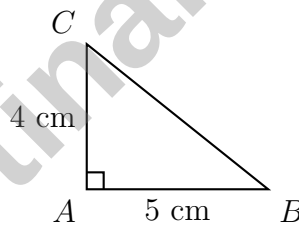
2) What is $2\frac{1}{2} \times 4$?

- ☐ A. 8 ☐ C. 10
☐ B. 9 ☐ D. 12

3) A graphic designer charges a one-time project fee of \$300 plus a 5% usage fee on all client revenue from the design. If the client generates \$10,000 in revenue, what is the total amount owed?

- ☐ A. \$500 ☐ C. \$1,300
☐ B. \$800 ☐ D. \$10,300

4)



Triangle ABC with $AB = 5$ cm, $AC = 4$ cm, and a right angle at A satisfies which congruence condition?

- ☐ A. SSS ☐ C. ASA
☐ B. SAS ☐ D. RHS



5) Which equation does NOT represent the additive inverse property?

☐ A. $-7 + 7 = 0$

☐ C. $-20 + 0 = -20$

☐ B. $35 + (-35) = 0$

☐ D. $100 + (-100) = 0$

6) A proportional relationship is shown by a line through the origin and $(4, 6)$. What is the constant of proportionality?

7) A cube has edge length 6 cm. Find its surface area.

☐ A. 36 cm^2

☐ C. 144 cm^2

☐ B. 72 cm^2

☐ D. 216 cm^2

8) A simulation uses a spinner with two equal sections to model guessing on a multiple-choice question with four choices. Is this a good model?

☐ A. Yes, because both have equally likely outcomes

☐ C. No, because the probabilities do not match

☐ B. Yes, because the spinner is easy to use

☐ D. No, because you cannot use a spinner twice

9) What is $18 + 27$?

☐ A. -45

☐ C. 45

☐ B. 9

☐ D. 486



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10) Simplify: $9c + 2d - c + 5d - 4c$

☐ A. $4c + 7d$

☐ C. $-4c + 7d$

☐ B. $18cd$

☐ D. $14c + 7d$

11) Which expression shows $4x + 8y$ factored completely?

☐ A. $4(x + 2y)$

☐ C. $2(2x + 4y)$

☐ B. $4x(1 + 2y)$

☐ D. $x(4 + 8y)$

12) For the inequality $x - 4 \geq 3$, which value is **not** a solution?

☐ A. $x = 7$

☐ C. $x = 6$

☐ B. $x = 10$

☐ D. $x = 100$

13) At a bakery, 8 cups of flour are divided equally into $\frac{1}{4}$ -cup portions. How many portions are there?

☐ A. 2 portions

☐ C. 16 portions

☐ B. 8 portions

☐ D. 32 portions

14) What is $\frac{17}{50}$ as a decimal?

☐ A. 0.17

☐ C. 0.51

☐ B. 0.34

☐ D. 0.74

15) A garden with initial area of 120 sq ft gains $\frac{1}{3}$ of its original area. What is the new area?

☐ A. 160 sq ft

☐ C. 80 sq ft

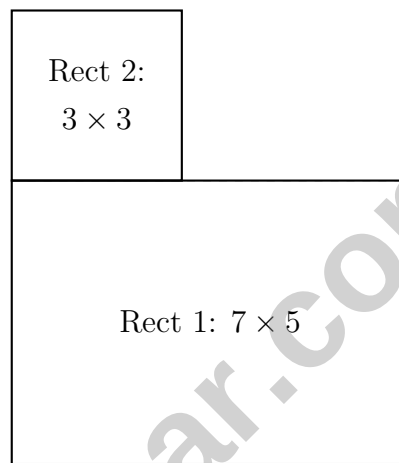
☐ B. 40 sq ft

☐ D. 200 sq ft



- 1) A histogram shows test scores for two classes. Class 1 has a tall bar at 90–95 with few lower scores. Class 2 has bars spread from 70 to 95 with a shorter peak around 80. Which statement is most accurate?

- ☐ A. Class 1 performed better with less variation ☐ C. Both classes have identical score distributions
- ☐ B. Class 2 had more students overall ☐ D. Class 2 has higher average scores



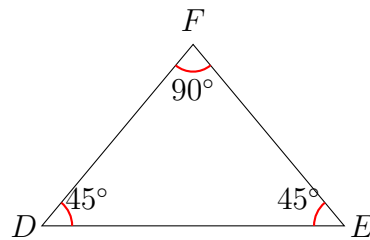
2)

An L-shaped room consists of a large rectangle ($7 \text{ m} \times 5 \text{ m}$) and a small rectangle ($3 \text{ m} \times 3 \text{ m}$) attached at a corner. Which equation correctly finds the total area?

- ☐ A. $7 \times 5 \times 3 \times 3$ ☐ C. $7 \times 5 + 3 \times 3$
- ☐ B. $(7 + 5) + (3 + 3)$ ☐ D. $7 + 3 \times 5 + 3$
- 3) A triangular prism has a base that is a right triangle with legs 10 inches and 6 inches. If the volume is 360 in^3 , what is the depth of the prism?

- ☐ A. 6 in ☐ C. 15 in
- ☐ B. 12 in ☐ D. 30 in





4)

A right isosceles triangle has two legs of length 6 cm each. Its angle measures can be:

☐ A. $45^\circ, 45^\circ, 90^\circ$
☐ C. $30^\circ, 60^\circ, 90^\circ$
☐ B. $60^\circ, 60^\circ, 60^\circ$
☐ D. $50^\circ, 50^\circ, 80^\circ$

5) A circle has a diameter of $\frac{30}{7}$ meters. What is its radius?

☐ A. $\frac{15}{7}$ meters

☐ C. $\frac{60}{7}$ meters

☐ B. $\frac{30}{7}$ meters

☐ D. 7 meters

6) A rectangular prism has dimensions 9 in $\times$ 3 in $\times$ 6 in. What is the surface area?

☐ A. 54 in^2
☐ C. 198 in^2
☐ B. 108 in^2
☐ D. 324 in^2

7) A simulation models the probability of a customer making a purchase as $\frac{2}{5}$. Which of the following spinners would be most appropriate for this simulation?

☐ A. A spinner with 3 equal sections, 1 shaded

☐ C. A spinner with 10 equal sections, 4 shaded

☐ B. A spinner with 5 equal sections, 2 shaded

☐ D. A spinner with 5 equal sections, 3 shaded


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- 1) A rectangle has dimensions 4 in by 6 in at a scale of 1 in : 2 ft. If redrawn at a new scale of 1 in : 4 ft, what are the new dimensions?
- ☐ A. 1 in by 1.5 in ☐ C. 8 in by 12 in
☐ B. 2 in by 3 in ☐ D. 16 in by 24 in
- 2) Sofia opens a savings account with \$400 at a simple interest rate of 2.5% per year. What will be the total amount in her account after 4 years?
- ☐ A. \$410 ☐ C. \$430
☐ B. \$500 ☐ D. \$440
- 3) A graph shows the line passing through points (0, 0) and (2, 8). What is the constant of proportionality?
- ☐ A. $k = 2$ ☐ C. $k = 8$
☐ B. $k = 6$ ☐ D. $k = 4$
- 4) What percent is $\frac{1}{20}$?
- ☐ A. 2% ☐ C. 20%
☐ B. 50% ☐ D. 5%
- 5) A store advertises “If your item costs more than \$50, get 30% off; if it costs \$50 or less, get 20% off.” A customer buys a shirt for \$55 before discount. After the discount, how much does she pay?
- ☐ A. \$11 ☐ C. \$25
☐ B. \$44 ☐ D. \$38.50



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- 6) A simulation of rolling two dice (using two spinners, each with 6 equal sections) is performed 200 times. The event "getting a sum of at least 10" is tracked. The successful outcomes are (4, 6), (5, 5), (5, 6), (6, 4), (6, 5), (6, 6) — that is, 6 outcomes out of 36. If the simulation results show 35 successes in 200 trials, what is the estimated probability of rolling a sum of at least 10?
- ☐ A. 0.12 ☐ C. 0.31
☐ B. 0.17 ☐ D. 0.35
- 7) Solve: $\frac{x}{-4} > 3$
- ☐ A. $x < -12$ ☐ C. $x > -\frac{3}{4}$
☐ B. $x > -12$ ☐ D. $x > 12$
- 8) Two similar figures have a scale factor of 3 : 4. If the smaller figure has a side length of 9 cm, what is the length of the corresponding side in the larger figure?
- ☐ A. 6.75 cm ☐ C. 13.5 cm
☐ B. 12 cm ☐ D. 27 cm
- 9) A circular pool has a radius of 9 feet. What is the area of the pool's surface? Use $\pi \approx 3.14$.
- ☐ A. 56.52 ft² ☐ C. 254.34 ft²
☐ B. 113.04 ft² ☐ D. 1017.36 ft²
- 10) A company wants to learn about customer satisfaction. It mails surveys to customers and receives responses only from those who make the effort to mail back the survey. What type of bias is this?
- ☐ A. Convenience bias ☐ C. Voluntary response bias
☐ B. Leading question bias ☐ D. Systematic bias



New York State Testing Program 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 State Testing Program practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.RP.3) Simple: $1000 \times 0.06 \times 3 = 180$. Compound: $1000(1.06)^3 = 1191.02$; interest = 191.02. Difference: $191.02 - 180 = 11.02$.
- 2) **Choice C is correct.** (7.NS.2) $2\frac{1}{2} = \frac{5}{2}$. So $\frac{5}{2} \times 4 = \frac{20}{2} = 10$.
- 3) **Choice C is correct.** (7.RP.3) Usage fee = $0.05 \times 10000 = \$500$. Total = $300 + 500 = \$1,300$.
- 4) **Choice B is correct.** (7.G.1-7.G.5) Two sides and the included right angle are given: $AC = 4$ cm, $AB = 5$ cm, and angle $A = 90^\circ$ is between them. This is SAS (Side-Angle-Side) congruence.
- 5) **Choice C is correct.** (7.NS.1-7.NS.3) The additive inverse property states that a number plus its opposite equals zero. Option C shows a number plus zero, which is the additive identity property, not the inverse property.
- 6) **The correct answer is 1.5.** (7.RP.1-7.RP.3) The unit rate is $6 \div 4 = 1.5$.
- 7) **Choice D is correct.** (7.G.4-7.G.6) A cube has 6 faces, each a square with side length 6 cm. $SA = 6s^2 = 6(6)^2 = 6(36) = 216 \text{ cm}^2$.
- 8) **Choice C is correct.** (7.SP.5-7.SP.8) True guessing probability on a 4-choice question is $\frac{1}{4}$, not $\frac{1}{2}$. A spinner with 4 equal sections would be better.
- 9) **Choice C is correct.** (7.NS.1b) Both numbers are positive, so add them: $18 + 27 = 45$.
- 10) **Choice A is correct.** (7.EE.1) c terms: $(9 - 1 - 4)c = 4c$. d terms: $(2 + 5)d = 7d$. Result: $4c + 7d$.
- 11) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of 4 and 8 is 4. Factor: $4x + 8y = 4(x + 2y)$.
- 12) **Choice C is correct.** (7.EE.4b) Check $x = 6$: $6 - 4 = 2 \not\geq 3$. The other values give 3, 6, and 96, all ≥ 3 .
- 13) **Choice D is correct.** (7.NS.1-7.NS.3) $8 \div \frac{1}{4} = 8 \times \frac{4}{1} = 32$.
- 14) **Choice B is correct.** (7.NS.2d) Divide $17 \div 50 = 0.34$. Since $50 = 2 \times 5^2$, this is a terminating decimal.
- 15) **Choice A is correct.** (7.NS.1-7.NS.3) New area = $120 + \frac{1}{3} \times 120 = 120 + 40 = 160$ sq ft.
- 16) **Choice C is correct.** (7.NS.1-7.NS.3) $1.8 \times 10^6 = 1,800,000$, which is larger than all others.
- 17) **Choice C is correct.** (7.EE.1-7.EE.2) Check C: $(2c + 3) + (5c - 2) = (2c + 5c) + (3 - 2) = 7c + 1$ ✓.
- 18) **The correct answer is A,B.** (7.RP.3) Choice A: 20% of 500 = $0.20 \times 500 = 100$. ✓ Choice B: 50% of 500 = $0.50 \times 500 = 250$. ✓ Choice C: 10% of 500 = 50, not 40. ✗ Choice D: 15% of 500 = 75, not 80. ✗
- 19) **Choice B is correct.** (7.EE.3-7.EE.4) Set up: $12h + 25 = 121 \Rightarrow 12h = 96 \Rightarrow h = 8$.
- 20) **Choice C is correct.** (7.G.1-7.G.5) The scale factor is $15 \div 5 = 3$. The shortest side of the larger triangle is $3 \times 3 = 9$.
- 21) **Choice B is correct.** (7.G.4-7.G.6) Correct: $3.14 \times 25 = 78.5 \text{ cm}^2$. Student: $3 \times 25 = 75 \text{ cm}^2$. Difference: $78.5 - 75 = 3.5 \text{ cm}^2$.
- 22) **Choice B is correct.** (7.SP.1-7.SP.4) A population is the entire group of interest. All teenagers who own a smartphone is the complete group; the other options describe samples or parts of a larger population.
- 23) **The correct answer is 150.** (7.RP.3) Calculate $\frac{3}{5} \times 250 = \frac{3 \times 250}{5} = \frac{750}{5} = 150$ students.
- 24) **Choice B is correct.** (7.SP.5-7.SP.8) Main colors: 2; secondary colors: 3. Total: $2 \times 3 = 6$ combinations.
- 25) **Choice B is correct.** (7.NS.1-7.NS.3) Start at 0. Descend (go down) 3.5 m: $0 - 3.5 = -3.5$ m. Ascend (go up) 1.2 m: $-3.5 + 1.2 = -2.3$ m.
- 26) **Choice C is correct.** (7.NS.1-7.NS.3) Total cost: $12.50 \times 7.5 = 93.75$ dollars.
- 27) **Choice B is correct.** (7.EE.1-7.EE.2) Distribute the 4 and 3 to each term in the parentheses: $4x - 8 + 3x + 3$. Then combine like terms: $(4x + 3x) + (-8 + 3) = 7x - 5$. The simplified form shows the final equivalent expression.
- 28) **Choice A is correct.** (7.EE.1-7.EE.2) When multiplying powers with the same base, add the exponents: $3^5 \cdot 3^2 = 3^{5+2} = 3^7$, not 3^{10} . The student multiplied the exponents ($5 \times 2 = 10$) instead of adding them.
- 29) **Choice C is correct.** (7.EE.4a) Distribute: $5x + 15 = 2x + 36$. Subtract $2x$: $3x + 15 = 36$. Subtract 15: $3x = 21$. Divide by 3: $x = 7$.
- 30) **Choice B is correct.** (7.EE.3-7.EE.4) The arrow starts at 1 and moves 2 units right to 3; original was 1.
- 31) **Choice C is correct.** (7.G.1-7.G.5) Set up: $\frac{2 \text{ in}}{5 \text{ miles}} = \frac{x}{20 \text{ miles}}$. Cross-multiply: $5x = 40$, so $x = 8$ in.



Hi, Calm Solver!

◇ This broad and demanding book gave you seven strong Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. A calm mind can see choices more clearly. That matters in Grade 7, where one problem may have several possible entry points. ◇

★ **Remember this:** You practiced building calm by doing full tests. Each completed page is rehearsal for staying steady when the real test feels serious. ★

Calm-Test Moves

- **Pause:** Give your brain one quiet second.
- **Choose:** Pick the first useful step.
- **Continue:** Do not demand perfection immediately.
- **Check:** Use review time wisely.

Grade 7 test-day tip: If you feel rushed, slow your reading for one sentence. Clear reading saves time.

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

Jay Daie

Your Calm-Test Coach

Practice Today. Succeed Tomorrow!

This book includes **7** 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.



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Better Problem Solving

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Deeper Understanding

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Test Confidence

Familiarize with test formats and improve accuracy and speed.



Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

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- ✓ The Number System
- ✓ Expressions & Equations
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- ✓ 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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