

6

NEW JERSEY

NJSLA

GRADE

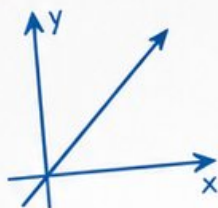
7

MATH

PRACTICE TESTS

Standards Aligned
Problem Solving For
Comprehensive
Assessment Programs

$$y = mx + b$$



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



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



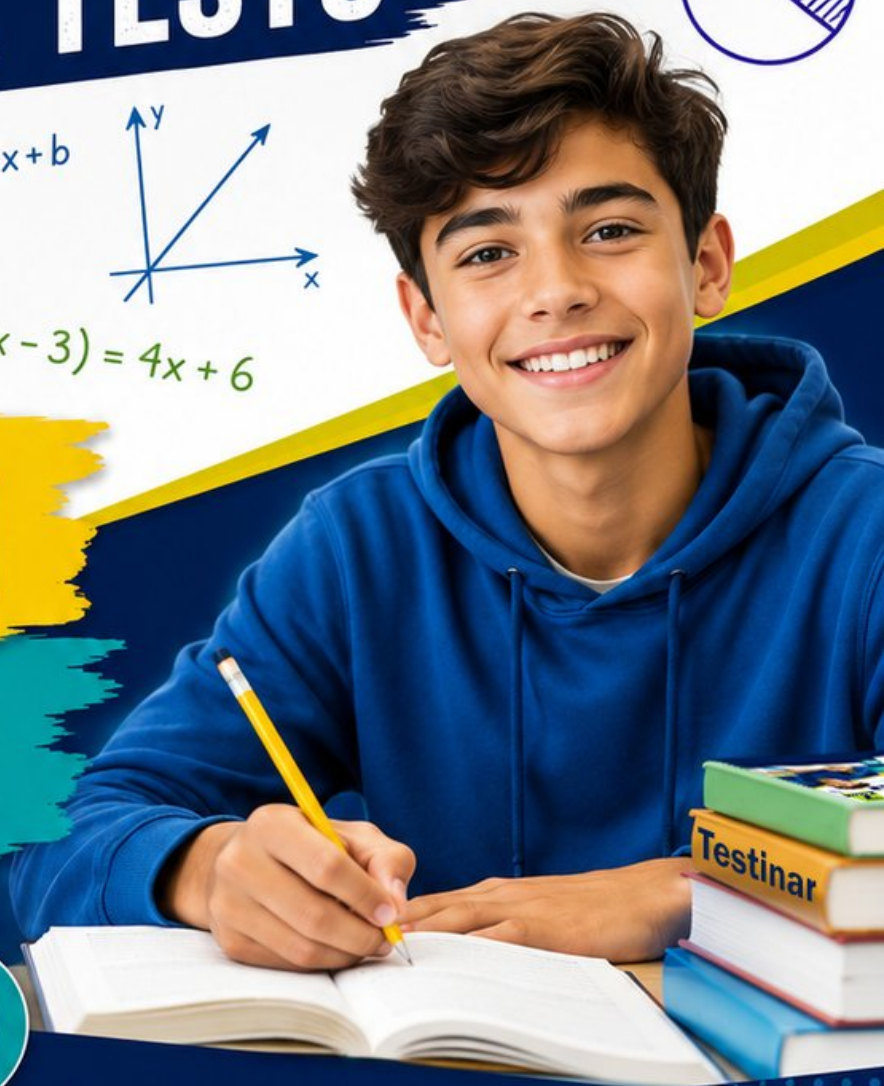
Strengthen
Math Skills



Detailed Answers
& Explanations



Improve Test
Performance



6 New Jersey NJSLA Grade 7 Math Practice Tests

NJSLA-Aligned Practice with Keys and Skill Review



Six complete 40-question Grade 7 NJSLA 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 Jersey Grade 7 Problem Solver!

Six focused rounds for sharper NJSLA math thinking

This book gives you six full Grade 7 NJSLA 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 Jersey 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 Jersey 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 NJSLA 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

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1) Solve for x : $5(2x - 1) = 45$

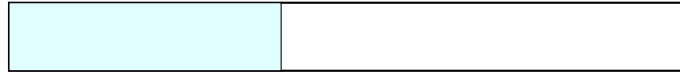
☐ A. $x = 6$

☐ C. $x = 5$

☐ B. $x = 4.5$

☐ D. $x = 7$

?



2)

Part = 32

Whole = 80

Using the bar model, set up a proportion to find the percent.

☐ A. $32 = 0.8p$

☐ C. $\frac{32}{100} = \frac{80}{p}$

☐ B. $\frac{80}{32} = \frac{100}{p}$

☐ D. $\frac{32}{80} = \frac{p}{100}$

3) A point (a, b) is rotated 180° about the origin, resulting in $(6, -3)$. Write (a, b) .

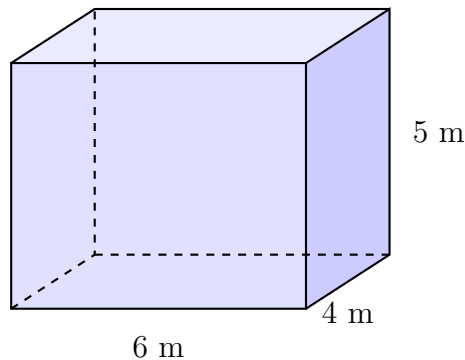
4) Which set of conditions does NOT uniquely determine a triangle?

☐ 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)

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

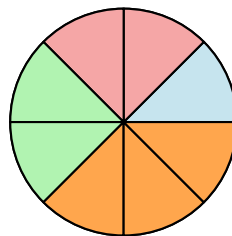
☐ A. 120 m^2
☐ C. 166 m^2
☐ B. 148 m^2
☐ D. 240 m^2

6) A healthcare study wants to compare health outcomes between two hospitals. If the study only surveys patients at Hospital A who are willing to complete the survey, what sampling error occurs?

☐ A. Measurement error only

☐ C. Standard deviation increase

☐ B. Voluntary response bias and selection bias

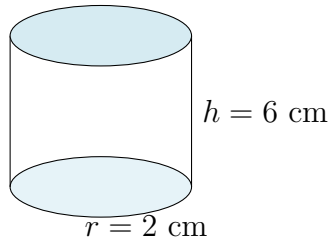
☐ D. Random sampling error


7)

A spinner has 8 equal sections: 1 blue, 2 red, 2 green, and 3 yellow. What is the probability of landing on yellow?

☐ A. $\frac{1}{8}$
☐ C. $\frac{3}{8}$
☐ B. $\frac{2}{8}$
☐ D. $\frac{1}{2}$


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8)

What is the volume of the cylinder shown? Use $\pi \approx 3.14$.

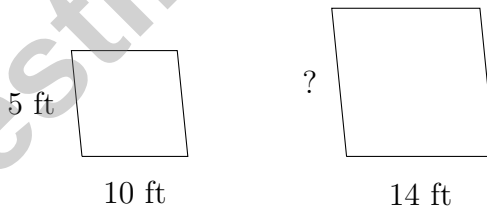
☐ A. 37.68 cm^3
☐ C. 75.36 cm^3
☐ B. 50.24 cm^3
☐ D. 150.72 cm^3

- 9) Two students' quiz scores over 8 quizzes are: Student P: 85, 87, 86, 88, 85, 87, 86, 89
Student Q: 75, 92, 80, 91, 78, 93, 82, 89 Both have a mean of 87. Which student's performance is more predictable?

☐ A. Student P (scores cluster around 87)

☐ C. Both are equally predictable

☐ B. Student Q (wider range shows learning)

☐ D. Student Q (higher high score)


10)

The parallelograms are similar. The first has a height of 5 ft and a base of 10 ft. The second has a base of 14 ft. What is the height of the second parallelogram?



1) Are the expressions $12a - 5a + 3a$ and $10a$ equivalent?

- ☐ A. Yes, because $12 - 5 + 3 = 10$.
 ☐ C. Yes, both are equal to $10a$.
- ☐ B. No, because the coefficients are different.
 ☐ D. No, because $12a - 5a + 3a$ cannot be simplified.

Original: \$200

Student: \$250 (Wrong!)

Add \$50 only

Correct: \$300

Add \$100 (50% of \$200)

2)

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

3) In a simulation of drawing colored balls from a bag, which change would improve the reliability of the probability estimate?

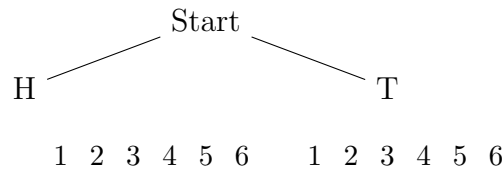
- ☐ A. Using a smaller bag
 ☐ C. Using fewer colors
- ☐ B. Performing more trials
 ☐ D. Replacing the bag after each trial

4) Construct a stem-and-leaf plot from the ordered data $\{56, 58, 61, 64, 67, 69, 72, 75\}$ using stems 5, 6, 7. How many leaves appear under Stem 6?



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- 5) A fair six-sided die is rolled and a coin is flipped. Which of the following is the correct way to count the sample space?



- ☐ A. $6 + 2 = 8$ outcomes ☐ C. $6 - 2 = 4$ outcomes
☐ B. $6 \times 2 = 12$ outcomes ☐ D. $\frac{6}{2} = 3$ outcomes
- 6) A restaurant offers 3 appetizers, 4 entrees, and 2 desserts. How many different meals (appetizer, entree, dessert) are possible?
- ☐ A. 9 ☐ C. 24
☐ B. 12 ☐ D. 30
- 7) A dot plot displays the number of hours students exercise per week: 2, 2, 3, 3, 3, 4, 4, 4, 4, 5, 5, 6. What is the mode of the data?

- 8) A marble is drawn from a bag, its color is recorded, and it is returned. After 800 draws, a blue marble was drawn 216 times. If the experiment is repeated with 1200 draws, approximately how many times would you expect to draw a blue marble?
- ☐ A. 324 ☐ C. 432
☐ B. 216 ☐ D. 648



- 1) Two rectangular prisms have the same base area of 25 cm^2 . The first has a height of 4 cm and the second has a height of 8 cm. By how much is the volume of the second greater than the first?

- ☐ A. 100 cm^3
☐ C. 50 cm^3
☐ B. 75 cm^3
☐ D. 25 cm^3

- 2) If a circle's radius is 7 inches, which expression gives its circumference?

- ☐ A. 7π
☐ C. 49π
☐ B. 14π
☐ D. 28π

- 3) The total surface area of a cylinder with radius r and height h can be expressed as:

- ☐ A. $\pi r^2 + 2\pi rh$
☐ C. $2\pi r(r + h)$
☐ B. $2\pi rh$ only
☐ D. $\pi r(2r + 2h)$

- 4) A sports league compares two seasons' scoring:

Season	Q1	Q3	Median
Season 1	60	85	72
Season 2	65	88	76

Which season shows overall improvement?

- ☐ A. Season 1 (lower scores are better for defense)
☐ C. Both seasons are identical
☐ B. Season 2 (higher median, Q1, and Q3)
☐ D. Cannot determine without the means



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& answers

- 5) A dot plot shows the number of goals scored by soccer players: 2 (two players), 3 (three players), 4 (four players), 5 (two players), 6 (one player). What is the mean number of goals?
- ☐ A. 3.5 goals ☐ C. 4 goals
☐ B. 3.8 goals ☐ D. 5.5 goals
- 6) Two fair spinners are used. Spinner 1 has 4 equal sections, and Spinner 2 has 3 equal sections. A student incorrectly calculates $4 + 3 = 7$ total outcomes instead of multiplying. Why is addition wrong in this context?
- ☐ A. Addition counts outcomes within one spinner, not combinations across spinners ☐ C. There are only 12 outcomes, not 7
☐ B. The spinners are not fair ☐ D. The total is actually 7, and multiplication is unnecessary
- 7) A floor tile is a perfect square with an area of 16 square cm. What is the side length?
- ☐ A. 3 cm ☐ C. 5 cm
☐ B. 4 cm ☐ D. 6 cm
- 8) Which expression is equivalent to $1.08m$?
- ☐ A. $m + 0.08m$ ☐ C. $1.08 + m$
☐ B. $m - 0.08m$ ☐ D. $0.92m$
- 9) Triangle ABC has sides 13 cm, 5 cm, and 12 cm. Compute $13^2 - (5^2 + 12^2)$.



New Jersey NJSLA 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 Jersey NJSLA practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.EE.4a) Distribute: $10x - 5 = 45$. Add 5: $10x = 50$. Divide by 10: $x = 5$.
- 2) **Choice D is correct.** (7.RP.3) Set part over whole equal to percent over 100: $\frac{32}{80} = \frac{p}{100}$. Cross-multiply: $p = 40\%$.
- 3) **The correct answer is $(-6, 3)$.** (7.G.1-7.G.5) A 180° rotation about the origin uses the rule $(a, b) \rightarrow (-a, -b)$. If the image is $(6, -3)$, then $(-a, -b) = (6, -3)$, so $a = -6$ and $b = 3$. Thus the original point is $(a, b) = (-6, 3)$.
- 4) **Choice C is correct.** (7.G.1-7.G.5) This condition (sometimes called the "ambiguous case") can produce 0, 1, or 2 different triangles, unlike the others, which uniquely determine a triangle.
- 5) **Choice B is correct.** (7.G.4-7.G.6) $SA = 2(6 \cdot 5 + 6 \cdot 4 + 5 \cdot 4) = 2(30 + 24 + 20) = 2(74) = 148 \text{ m}^2$.
- 6) **Choice B is correct.** (7.SP.1-7.SP.4) Only surveying willing patients from one hospital creates two forms of bias that prevent accurate comparison.
- 7) **Choice C is correct.** (7.SP.5-7.SP.8) Yellow sections: 3 out of 8. $P(\text{yellow}) = \frac{3}{8}$.
- 8) **Choice C is correct.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times 2^2 \times 6 = 3.14 \times 4 \times 6 = 75.36 \text{ cm}^3$.
- 9) **Choice A is correct.** (7.SP.1-7.SP.4) Student P: 85–89 (range = 4, MAD is small). Student Q: 75–93 (range = 18). Student P's scores cluster consistently; Student Q varies wildly despite the same mean.
- 10) **The correct answer is 7.** (7.G.1-7.G.5) Scale factor = $\frac{14}{10} = 1.4$. Height = $5 \times 1.4 = 7 \text{ ft}$.
- 11) **Choice A is correct.** (7.SP.1-7.SP.4) In a stem-and-leaf plot, stem 8 with leaves 0, 2, 5, 7, 9 represents 80, 82, 85, 87, 89.
- 12) **Choice D is correct.** (7.SP.5-7.SP.8) By the counting principle: $3 \times 6 \times 8 = 144$ single-topping pizzas.
- 13) **Choice B is correct.** (7.SP.5-7.SP.8) Independent events: $P(A \text{ and } B) = \frac{1}{5} \cdot \frac{1}{3} = \frac{1}{15}$.
- 14) **Choice B is correct.** (7.SP.6) Correct probability: $\frac{32}{200} = 0.16$. Student's error: $\frac{200}{32} = 6.25$. The student inverted the fraction.
- 15) **Choice C is correct.** (7.SP.1-7.SP.4) Count all leaves: $3 + 4 + 3 + 2 = 12$ data points.
- 16) **Choice B is correct.** (7.SP.5-7.SP.8) $A = 0.5$, $B = 0.6$, $C = 0.55$. Event B has the highest probability ($0.6 > 0.55 > 0.5$).
- 17) **Choice C is correct.** (7.SP.1-7.SP.4) Morning: $\frac{45}{60} = 0.75$ or 75%. Afternoon: $\frac{54}{72} = 0.75$ or 75%. Both show equal proportions.
- 18) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|550 - 625|}{625} \times 100\% = \frac{75}{625} \times 100\% = 12\%$.
- 19) **Choice D is correct.** (7.EE.1-7.EE.2) The diagram shows $3(x) + 3(2) = 3x + 6$. The missing value is 6.
- 20) **Choice D is correct.** (7.RP.3) Markup = $0.35 \times 600 = \$210$. Selling price = $600 + 210 = \$810$.
- 21) **The correct answer is B, C.** (7.G.1-7.G.5) B and C are equivalent and correct: two angles are equal (50° each), so by the Isosceles Triangle Theorem, the sides opposite those angles must be equal. A is wrong (equilateral requires all angles 60°). D is wrong (two angles are the same).
- 22) **Choice D is correct.** (7.NS.1-7.NS.3) Choices A, B, and C all equal -9 . Choice D equals 9, which is not equivalent. The negative sign must be applied carefully.
- 23) **Choice C is correct.** (7.SP.1-7.SP.4) $19\% \text{ of } 1200 = 0.19 \times 1200 = 228 \text{ items}$.
- 24) **Choice C is correct.** (7.RP.1-7.RP.3) Divide the real length by the scale factor: $72 \div 72 = 1 \text{ meter}$.
- 25) **Choice D is correct.** (7.RP.3) The tax is $8\% \text{ of } \$120$: $0.08 \times 120 = 9.60 \text{ dollars}$.
- 26) **Choice C is correct.** (7.NS.1b) Team A's score changes by: $-12 + 17 = 5$. They are now 5 points ahead.
- 27) **Choice A is correct.** (7.EE.1-7.EE.2) Substitute: $\frac{2(5+3)}{4} = \frac{2(8)}{4} = \frac{16}{4} = 4$.
- 28) **Choice B is correct.** (7.EE.1) Combine: $(-4 + 6 - 5)m = -3m$.
- 29) **The correct answer is 14.** (7.G.4-7.G.6) $C = 2\pi r \Rightarrow 88 = 2 \times \frac{22}{7} \times r \Rightarrow 88 = \frac{44}{7}r \Rightarrow r = 88 \times \frac{7}{44} = 14 \text{ cm}$.
- 30) **Choice A is correct.** (7.EE.4b) "A number" is n ; "is more than" is $>$; "twice itself minus 5" is $2n - 5$. Direct translation: $n > 2n - 5$.
- 31) **Choice D is correct.** (7.RP.1-7.RP.3) The line does not pass through the origin; it starts at $(0, 1)$. This makes it non-proportional.



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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