

# 7 New Jersey NJSLA Grade 7 Math Practice Tests



7 PRINTED TESTS + 2 ONLINE TESTS

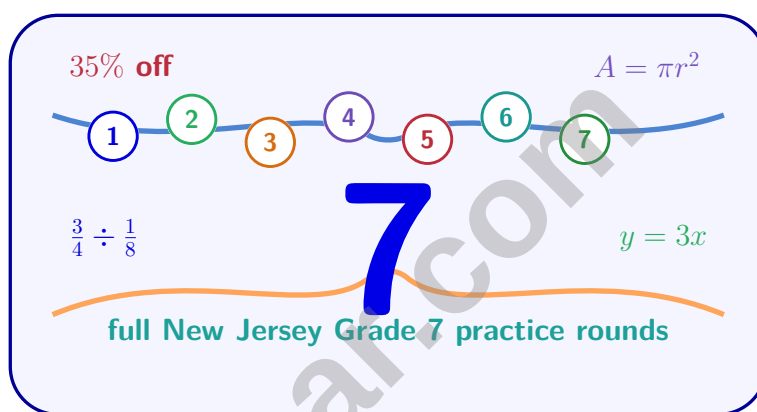


**Standards Aligned Problem Solving  
For Comprehensive Assessment Programs**



# 8 New Jersey NJSLA Grade 7 Math Practice Tests

*A classroom-ready review of New Jersey Grade 7 rational numbers, algebraic reasoning, scale models, circles, and statistical thinking*



Eight 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**



# Copyright ©

## Testinar Inc



Published by Testinar Inc

[Testinar.com](http://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 Jersey Grade 7 Problem Solver!

Eight focused rounds for sharper NJSLA math thinking

This book gives you seven 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

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 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?

Eight NJSLA 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.



Scan me!  
For more practice  
& answers

# Table of Contents

|                                               |       |            |
|-----------------------------------------------|-------|------------|
| ★ Practice Test 1                             | _____ | 14         |
| ★ Practice Test 2                             | _____ | 28         |
| ★ Practice Test 3                             | _____ | 43         |
| ★ Practice Test 4                             | _____ | 57         |
| ★ Practice Test 5                             | _____ | 72         |
| ★ Practice Test 6                             | _____ | 86         |
| ★ Practice Test 7                             | _____ | 99         |
| <b>Practice Test Answer Keys</b>              | _____ | <b>114</b> |
| <b>Practice Test Answers and Explanations</b> | _____ | <b>119</b> |

1) Compute  $-28 + (-15)$ .

☐ A.  $-43$

☐ C.  $13$

☐ B.  $-13$

☐ D.  $43$

2) What is  $-\frac{7}{8} \times 8$ ?

☐ A.  $-7$

☐ C.  $1$

☐ B.  $-8$

☐ D.  $7$

3) A baker makes 18 loaves of bread in 3 hours. At this constant rate, how many loaves are made per hour?

4) A concert ticket costs \$85, but the venue adds a 7% facility fee. What is the total cost per ticket?

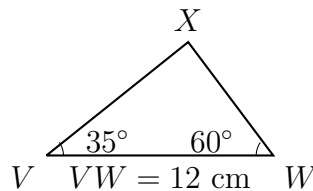
☐ A. \$85.70

☐ C. \$91.00

☐ B. \$92.95

☐ D. \$90.95

5)



Triangle  $VWX$  has  $\angle V = 35^\circ$ ,  $\angle W = 60^\circ$ , and side  $VW = 12 \text{ cm}$ . The third angle at  $X$  is:

☐ A.  $75^\circ$

☐ C.  $95^\circ$

☐ B.  $85^\circ$

☐ D.  $105^\circ$

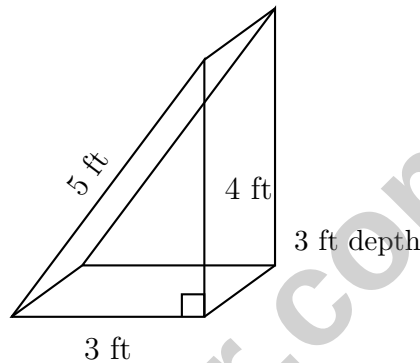
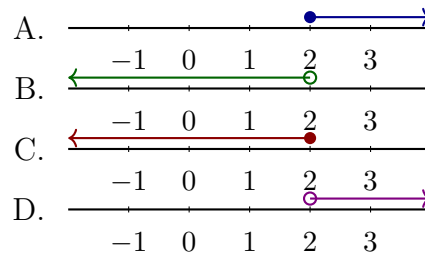


- 6) A student claims that  $-14 + 14 = 28$ . What is the student's error?
- ☐ A. They forgot that opposites sum to 0
- ☐ B. They should have subtracted instead
- ☐ C. The answer is correct
- ☐ D. Absolute values were not used
- 7) Simplify:  $3x + 4y + 2z - x + y - z$
- ☐ A.  $2x + 5y + z$
- ☐ B.  $4x + 4y + 2z$
- ☐ C.  $9xyz$
- ☐ D.  $2x + 3y - z$
- 8) Which pair of expressions are equivalent?
- ☐ A.  $2(x + 7)$  and  $2x + 7$
- ☐ B.  $3(2y - 4)$  and  $6y - 12$
- ☐ C.  $5(a + 2)$  and  $5a + 2$
- ☐ D.  $4(3m - 1)$  and  $12m - 1$
- 9) Which statement best explains why simulation results often differ from theoretical probabilities?
- ☐ A. The simulation tool is always imperfect
- ☐ B. Random variation causes small differences in finite samples
- ☐ C. Theoretical probability is always wrong
- ☐ D. More simulations guarantee exact agreement with theory
- 10) A student evaluates  $2x + 3y$  when  $x = -4$  and  $y = 2$ , and writes: " $2(-4) + 3(2) = -8 + 6 = -2$ ." Is this correct?
- ☐ A. No, the error is in the multiplication of  $2x$
- ☐ B. No, the error is in the addition step
- ☐ C. No, negative times positive is positive
- ☐ D. Yes, the answer is  $-2$



Scan me!  
For more practice  
& answers

11) Which number line represents  $x \leq 2$ ?



12)

A triangular prism has a right triangular base with legs 3 ft and 4 ft (hypotenuse 5 ft), and the prism has depth 3 ft. Find the surface area.

☐ A. 12 ft<sup>2</sup>

☐ C. 48 ft<sup>2</sup>

☐ B. 24 ft<sup>2</sup>

☐ D. 72 ft<sup>2</sup>

13) A fitness center wants to know about its members' exercise habits. It surveys members only during evening hours when most people are at the gym. What is this sampling bias called?

☐ A. Stratified bias

☐ C. Measurement bias

☐ B. Selection bias

☐ D. Convenience sampling



- 1) Which factorization shows why  $6x - 9 = 3(2x - 3)$ ?
- ☐ A. The GCF of  $6x$  and  $9$  is  $3$       ☐ D. We subtract the smaller from the larger
- ☐ B.  $6$  and  $9$  are both divisible by  $2$
- ☐ C.  $2x$  is a common term
- 2) A dot plot shows cholesterol levels (in mg/dL) for two age groups. Group 1 (Ages 30–40): 160, 165, 165, 170, 170, 170, 175, 180 mg/dL; Group 2 (Ages 50–60): 140, 160, 190, 210, 230, 240 mg/dL. What is the key difference?
- ☐ A. Group 1 is more concentrated; Group 2 is more spread out      ☐ C. Both groups have identical levels
- ☐ B. Group 2 has lower cholesterol overall      ☐ D. Group 1 always has higher cholesterol
- 3) A composite figure is formed by a square ( $8\text{ m} \times 8\text{ m}$ ) with a right triangle (legs  $8\text{ m}$  and  $3\text{ m}$ ) attached to one side. What is the total area?
- ☐ A.  $64\text{ m}^2$       ☐ C.  $88\text{ m}^2$
- ☐ B.  $76\text{ m}^2$       ☐ D.  $100\text{ m}^2$
- 4) A rectangular prism has a length of  $20\text{ cm}$ . The width is half the length. The height is  $10\text{ cm}$ . What is the volume?
- ☐ A.  $1,200\text{ cm}^3$       ☐ C.  $4,000\text{ cm}^3$
- ☐ B.  $2,000\text{ cm}^3$       ☐ D.  $2,400\text{ cm}^3$
- 5) A sector of a circle is best described as:
- ☐ A. A line through the circle      ☐ C. A chord and an arc
- ☐ B. A pie-shaped region bounded by two radii and an arc      ☐ D. Half of a circle



Scan me!  
For more practice  
& answers

6) A savings bond worth \$500 with 3% annual compound interest is held for 5 years. Approximately what is the final value?

☐ A. \$575☐ B. \$579.64☐ C. \$580☐ D. \$650

7) Simplify:  $6x^2y + 3x^2y - 2x^2y$

☐ A.  $7x^2y$ ☐ B.  $11x^2y$ ☐ C.  $7x^4y$ ☐ D.  $4x^2y$ 

8) Which shows  $20y + 24$  factored completely?

☐ A.  $4(5y + 6)$ ☐ B.  $2(10y + 12)$ ☐ C.  $8(2.5y + 3)$ ☐ D.  $6(3.33y + 4)$ 

9) A simulation of rolling two dice uses two spinners, each with 6 equal sections numbered 1–6. If the simulation is performed 120 times, approximately how many times would you expect to see a sum of 7?

☐ A. 10 times☐ B. 15 times☐ C. 20 times☐ D. 25 times

10) Which expression represents “3 times a number  $k$ , minus 7”?

☐ A.  $3(k - 7)$ ☐ B.  $3k - 7$ ☐ C.  $7 - 3k$ ☐ D.  $3 + k - 7$ 

11) Which inequality represents “a number plus 8 is less than 15”?

☐ A.  $x + 8 < 15$ ☐ B.  $x + 8 > 15$ ☐ C.  $x - 8 < 15$ ☐ D.  $8x < 15$ 

1) What percent of 120 is 30?

☐ A. 15%

☐ C. 25%

☐ B. 20%

☐ D. 30%

2) A science lab measures temperature change over time. The table below shows the data. Is this a proportional relationship, and if so, what is the constant of proportionality?

| Time (min) | Temp Change (°C) |
|------------|------------------|
| 2          | 5                |
| 4          | 10               |
| 7          | 17.5             |

☐ A. Yes,  $k = 7$

☐ C. No, the values don't form a constant ratio

☐ B. Yes,  $k = 5$

☐ D. Yes,  $k = 2.5$

3) A recipe calls for  $\frac{2}{5}$  cup of sugar. What percent of a whole cup is this?

☐ A. 20%

☐ C. 40%

☐ B. 25%

☐ D. 50%

4) A student's test score improved from 72 to 90. What is the percent increase in the score?

☐ A. 18%

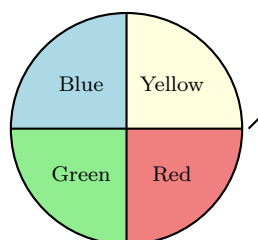
☐ C. 25%

☐ B. 20%

☐ D. 80%



Scan me!  
For more practice  
& answers



5)

The spinner above has 4 equal sections. If it is spun 80 times and the results are recorded, approximately how many times would you expect to see the blue section?

- ☐ A. 10 times                      ☐ C. 20 times  
☐ B. 15 times                      ☐ D. 25 times

- 6) A catering service charges a \$250 setup cost and \$15 per guest. If the event cost \$520, write an equation to represent the number of guests  $g$  attending, solve for  $g$ , and verify your answer.

- 7) A rectangular prism has length 8 m, width 5 m, and height 2 m. Find the surface area.

- ☐ A.  $80 \text{ m}^2$                       ☐ C.  $132 \text{ m}^2$   
☐ B.  $112 \text{ m}^2$                       ☐ D.  $176 \text{ m}^2$

- 8) A school wants to estimate the average amount of time students spend on homework per night. Which sample size is best?

- ☐ A. 10 students                      ☐ C. 100 students  
☐ B. 25 students                      ☐ D. 1000 students



## New Jersey Student Learning Assessments 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 Student Learning Assessments practice test.**

Testinar.com



## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (7.NS.1b) Both numbers are negative; add absolute values:  $|-28| + |-15| = 28 + 15 = 43$ , and keep the negative sign:  $-43$ .
- 2) **Choice A is correct.** (7.NS.2)  $-\frac{7}{8} \times 8 = \frac{-7 \times 8}{8} = -7$ . The 8's cancel.
- 3) **The correct answer is 6.** (7.RP.1-7.RP.3) Unit rate =  $18 \div 3 = 6$  loaves per hour.
- 4) **Choice D is correct.** (7.RP.3) Facility fee =  $0.07 \times 85 = \$5.95$ . Total =  $85 + 5.95 = \$90.95$ .
- 5) **Choice B is correct.** (7.G.1-7.G.5) The sum of angles in a triangle is  $180^\circ$ . Thus  $\angle X = 180^\circ - 35^\circ - 60^\circ = 85^\circ$ .
- 6) **Choice A is correct.** (7.NS.1-7.NS.3) The correct answer is  $-14 + 14 = 0$  because  $-14$  and  $14$  are opposites. The student incorrectly added the absolute values.
- 7) **Choice A is correct.** (7.EE.1) Combine like terms by variable:  $(3 - 1)x + (4 + 1)y + (2 - 1)z = 2x + 5y + z$ .
- 8) **Choice B is correct.** (7.EE.1-7.EE.2) Check:  $3(2y - 4) = 6y - 12$ . This is the only pair that are equivalent.
- 9) **Choice B is correct.** (7.SP.5-7.SP.8) Finite samples exhibit natural variation. As the number of trials increases, simulation results converge toward theoretical probability (Law of Large Numbers).
- 10) **Choice D is correct.** (7.EE.1-7.EE.2) The work is correct:  $2(-4) + 3(2) = -8 + 6 = -2$ .
- 11) **Choice C is correct.** (7.EE.4b)  $x \leq 2$  includes 2 (filled circle) and all values less than 2 (arrow left).
- 12) **Choice C is correct.** (7.G.4-7.G.6) Two triangular bases:  $2 \times \frac{1}{2}(3)(4) = 12 \text{ ft}^2$ . Three rectangular sides:  $3 \times 3 = 9$ ,  $4 \times 3 = 12$ ,  $5 \times 3 = 15 \text{ ft}^2$ . Total:  $12 + (9 + 12 + 15) = 12 + 36 = 48 \text{ ft}^2$ .
- 13) **Choice D is correct.** (7.SP.1-7.SP.4) Sampling only during evening hours is convenient for the surveyor but misses members who visit at other times, introducing convenience bias.
- 14) **Choice B is correct.** (7.NS.1-7.NS.3) In 10 hours, there are  $10 \div 2 = 5$  periods of 2 hours. Total drop:  $1.2 \times 5 = 6^\circ\text{C}$ , or  $-6^\circ\text{C}$ .
- 15) **Choice B is correct.** (7.EE.3-7.EE.4) Subtract 8:  $-3x = -6$ . Divide by  $-3$ :  $x = 2$ .
- 16) **Choice B is correct.** (7.G.1-7.G.5) Multiply the map distance by the scale factor:  $3 \times 50 = 150$  miles.
- 17) **Choice A is correct.** (7.G.1-7.G.5) Doubling the real scale (2.5 ft to 5 ft) halves the drawing:  $3.2 \div 2 = 1.6$  in.
- 18) **The correct answer is 15%.** (7.RP.3) The discount amount is  $60 - 51 = 9$  dollars. Percent discount:  $\frac{9}{60} = 0.15 = 15\%$ .
- 19) **Choice B is correct.** (7.G.1-7.G.5) Reflection over  $y = -x$  maps  $(x, y) \rightarrow (-y, -x)$ . So  $(4, 1) \rightarrow (-1, -4)$ .
- 20) **The correct answer is A, C.** (7.RP.1-7.RP.3) True: A ( $4 \times 6 = 24$  feet) and C ( $2 \times 6 = 12$  feet;  $2.5 \times 6 = 15$  feet). False: B (area scales by  $6^2 = 36$ , not 6); D (area:  $900 \div 36 = 25$  sq in, not 36); E (areas are reduced by  $\frac{1}{36}$  on the plan, not  $\frac{1}{6}$ ).
- 21) **The correct answer is \$630.** (7.RP.3) Simple interest =  $P \times r \times t = \$3,000 \times 0.07 \times 3 = \$630$ .
- 22) **Choice A is correct.** (7.G.1-7.G.5) Scale factor =  $\frac{19.5}{13} = 1.5$ . Corresponding leg =  $5 \times 1.5 = 7.5$  cm.
- 23) **Choice D is correct.** (7.G.4-7.G.6) Circle D has  $r = 4.5$  in, giving  $A \approx 3.14 \times 20.25 \approx 63.6 \text{ in}^2$ , larger than all others.
- 24) **Choice B is correct.** (7.SP.5-7.SP.8) The coin flip is independent of the die roll.  $P(\text{tails}) = \frac{1}{2}$ .
- 25) **Choice A is correct.** (7.NS.1-7.NS.3) Since  $5.2 < 7.1$ , the difference is negative:  $5.2 - 7.1 = -1.9$ .
- 26) **Choice B is correct.** (7.NS.1-7.NS.3) Divide the magnitudes:  $13 \div 4 = 3.25$ . Apply sign rule:  $(+) \div (-) = (-)$ . Thus  $13 \div (-4) = -3.25$ .
- 27) **The correct answer is \$7.35.** (7.RP.3) Simple:  $1500 \times 0.07 \times 2 = 210$ . Compound:  $1500(1.07)^2 = 1717.35$ ; interest =  $217.35$ . Difference:  $217.35 - 210 = 7.35$ .
- 28) **Choice A is correct.** (7.NS.2d) Divide  $1 \div 16 = 0.0625$ . Since  $16 = 2^4$ , this is a terminating decimal.
- 29) **Choice C is correct.** (7.NS.1-7.NS.3)  $7.9 \times 10^9 = 7.9 \times 1,000,000,000 = 7,900,000,000$  (7.9 billion).
- 30) **Choice A is correct.** (7.EE.1-7.EE.2) Quotient rule:  $v^{12} \div v^8 = v^{12-8} = v^4$ .
- 31) **Choice A is correct.** (7.EE.4a) One book at \$12 plus four pens at \$2 each:  $12 + 2(4) = 12 + 8 = 20$ .
- 32) **Choice C is correct.** (7.EE.3-7.EE.4) Multiply:  $3 \times \frac{2}{3} = \frac{6}{3} = 2$  cups. Check:  $\frac{2}{3}$  is roughly 0.67;  $3 \times 0.67 \approx 2$  ✓. Reasonable: tripling means flour increases 3 times.



Scan me!

For more practice  
& answers

## Hi, Momentum Builder!

◇ Finishing a Grade 7 practice book is not a small thing. It means you practiced persistence, patience, and flexible problem solving. ◇

★ **Remember this:** Some questions were quick. Others probably made you stop and think. Both kinds helped you grow because practice turns effort into confidence. This version gave you 7 opportunities to rehearse test-day habits. ★

### Momentum Habits

- **Start Clean:** Write down what the problem gives you.
- **Pick a Tool:** Use a table, model, equation, or graph.
- **Keep Moving:** Skip and return when needed.
- **Review Smart:** Study mistakes without judging yourself.

**Grade 7 test-day tip:** If a problem feels stuck, change tools. A graph, table, or sketch can make the same idea clearer.

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Momentum Partner

# 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.



## THIS BOOK INCLUDES:

**7** 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
- ✓ 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!



VISIT **TESTINAR.COM/MATH7** FOR MORE PRACTICE TESTS



PRACTICE  
REGULARLY



STAY  
FOCUSED



SOLVE  
CONFIDENTLY



SUCCEED  
BRIGHTLY