

9

Pennsylvania

PSSA

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program



9

**PRINTED
TESTS**



2

**ONLINE
TESTS**



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



BUILT FOR ACAP
Standards-Aligned



**STRENGTHEN
SKILLS**



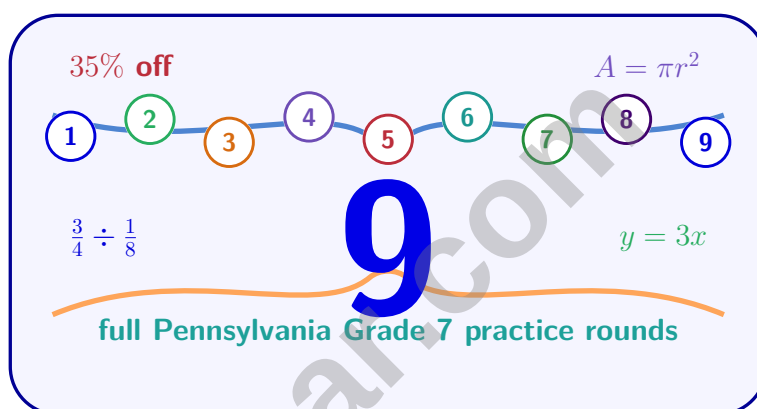
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Pennsylvania PSSA Grade 7 Math Practice Tests

Standards-Aligned Pennsylvania Practice for Proportional Reasoning, Expressions, Geometry, Statistics, and Probability



Nine complete 40-question Grade 7 PSSA 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, Pennsylvania Grade 7 Problem Solver!

Nine focused rounds for sharper PSSA math thinking

This book gives you nine full Grade 7 PSSA 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 Pennsylvania 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 nine-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.

Pennsylvania 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?

Nine PSSA tests, 360 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.
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	_____	13
★ Practice Test 2	_____	28
★ Practice Test 3	_____	42
★ Practice Test 4	_____	56
★ Practice Test 5	_____	70
★ Practice Test 6	_____	85
★ Practice Test 7	_____	99
★ Practice Test 8	_____	113
★ Practice Test 9	_____	128
Practice Test Answer Keys	_____	143
Practice Test Answers and Explanations	_____	149

- 1) Temperature drops 20 degrees from 10 degrees. Express the drop (change) as a signed number.
☐ A. 20 (ignores the direction of change) ☐ D. -20 (correct; drop is negative change)
☐ B. 30 (adds instead of subtracts) ☐ C. -10 (starting temperature)
- 2) A rental car company charges \$40 per day plus a 15% insurance premium on the daily rate. For a 5-day rental, what is the total cost?
☐ A. \$200 ☐ C. \$250
☐ B. \$300 ☐ D. \$230
- 3) A die was rolled multiple times. The experimental probability of rolling a 3 was $\frac{18}{90}$. How many times was the die rolled?
☐ A. 18 ☐ C. 72
☐ B. 30 ☐ D. 90
- 4) Convert 2 cubic meters to cubic centimeters. (Hint: 1 m = 100 cm)
☐ A. $2 \times 10^6 \text{ cm}^3$ ☐ C. $2 \times 10^{12} \text{ cm}^3$
☐ B. $2 \times 10^8 \text{ cm}^3$ ☐ D. $2 \times 10^9 \text{ cm}^3$
- 5) Which segment is NOT a chord?
☐ A. A diameter ☐ D. A segment through the center connecting two points on the circle
☐ B. A radius
☐ C. A segment with both endpoints on the circle



Scan me!
For more practice
& answers

- 6) A survey shows that the probability a student likes pizza is $\frac{7}{8}$. How many students out of 80 would you expect to NOT like pizza?
- ☐ A. 7 ☐ C. 70
☐ B. 10 ☐ D. 73
- 7) A certificate of deposit (CD) grows from \$3000 to \$3450 over 3 years using simple interest. What is the annual interest rate?
- ☐ A. 4% ☐ C. 5%
☐ B. 4.5% ☐ D. 5.5%
- 8) A clearance rack shows final prices after all discounts and markups have been applied. An item shows “Final: \$57.60, originally \$96.” If the discount percent was the same across all items, what was the discount percent?
- ☐ A. 33% ☐ C. 50%
☐ B. 38.4% ☐ D. 40%
- 9) Find the missing number: $-9 + ? = 4$.
- ☐ A. -13 ☐ C. 5
☐ B. -5 ☐ D. 13
- 10) A scale model of a bridge has a ratio of 1 : 500 (model to real). If the real bridge is 150 meters long, how long is the model in centimeters?
- ☐ A. 3 cm ☐ C. 300 cm
☐ B. 3000 cm ☐ D. 30 cm



11) If 12 is 15% of a number, what is the number?

☐ A. 60

☐ C. 80

☐ B. 72

☐ D. 100

12) A store sells apples at \$2.50 per pound. The relationship between pounds (p) and cost (c) is proportional. Write the equation.

☐ A. $c = p + 2.5$

☐ C. $p = 2.5c$

☐ B. $c = 2.5 + p$

☐ D. $c = 2.5p$

13) Two spinners are used to simulate rolling two dice. Each spinner has 6 equal sections numbered 1–6. If each spinner is spun once in a trial, how many different outcomes are in the sample space?

14) A punch recipe has a ratio of juice to water of 2 : 5. If you use 14 cups of juice, how many cups of water are needed?

15) A clothing store has a rack with 50 items. The sign says “60% off summer collection.” How many items are in the summer collection?

☐ A. 20 items

☐ C. 40 items

☐ B. 60 items

☐ D. 30 items

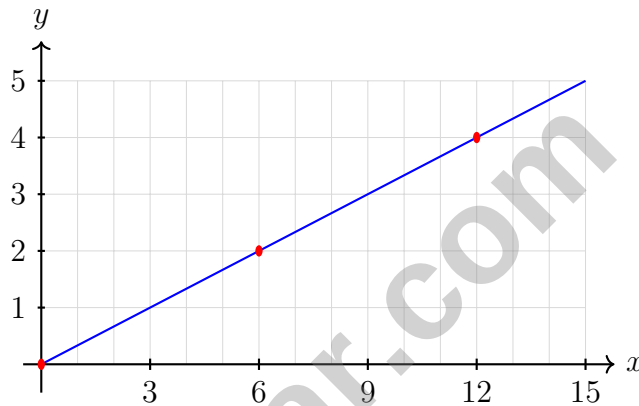


Scan me!
For more practice
& answers

- 1) A streaming service costs \$12.99 per month plus a one-time setup fee of \$19.99. Which expression shows the total cost C for n months?

- ☐ A. $C = 19.99 + 12.99n$ ☐ C. $C = 19.99(n + 12.99)$
☐ B. $C = 19.99n + 12.99$ ☐ D. $C = 12.99n + 12.99$

- 2) A graph shows points at $(0, 0)$, $(6, 2)$, and $(12, 4)$. If a fourth point is added, which coordinates would maintain the proportional relationship?



- ☐ A. $(4, 1)$ ☐ C. $(12, 5)$
☐ B. $(8, 3)$ ☐ D. $(15, 5)$
- 3) A runner covers $2\frac{1}{2}$ miles in $\frac{2}{5}$ hour. What is the runner's speed?

- ☐ A. 6.5 mph ☐ C. $\frac{5}{4}$ mph
☐ B. $\frac{5}{2}$ mph ☐ D. $\frac{25}{4}$ mph

- 4) A table shows the relationship between score s and reward points p . If the student says "The constant of proportionality is 2.5," which table matches this claim?

Table A: s	4	8	10
p	12	24	30

Table B: s	2	4	6
p	5	10	15

- ☐ A. Table A only ☐ C. Both tables
☐ B. Neither table ☐ D. Table B only



- 5) The cost c of buying n identical books is proportional to n . If 4 books cost \$18, what is the constant of proportionality (unit price per book)?

- ☐ A. \$2.50 ☐ C. \$14.00
☐ B. \$4.00 ☐ D. \$4.50

6)

Trial	1	2	3	4	5
Successes	22	28	25	27	23
Trials per Run	100	100	100	100	100

Five separate simulations each perform 100 trials and record the number of successes. What is the average estimated probability across all five simulations?

- ☐ A. 0.23 ☐ C. 0.27
☐ B. 0.25 ☐ D. 0.30

- 7) A student claims: $\frac{-4}{5} \div \frac{2}{3} = \frac{-8}{15}$ because “you multiply the numerators and denominators.” What is the correct quotient?

- 8) Which inequality represents “the sum of a number and 2 is not equal to 7”?

- ☐ A. $n + 2 \neq 7$ ☐ C. $n \neq 5$
☐ B. $n + 2 = 7$ ☐ D. $n + 7 \neq 2$



Scan me!
For more practice
& answers

1) Solve: $6x - \frac{1}{2} = \frac{11}{2}$

☐ A. $x = 1$

☐ B. $x = \frac{3}{2}$

☐ C. $x = 2$

☐ D. $x = \frac{5}{2}$

2) Solve: $\frac{2x}{5} = 8$

☐ A. $x = 16$

☐ B. $x = 20$

☐ C. $x = 24$

☐ D. $x = 32$

3) A drawing of a rectangular park uses a scale of 1 in : 200 ft. In the drawing, the park is 3 inches by 2 inches. What is the actual area of the park in square feet?

☐ A. 120000 sq ft

☐ B. 240000 sq ft

☐ C. 360000 sq ft

☐ D. 480000 sq ft

4) A model of a rectangular soccer field is 15 cm long at a scale of 1 cm : 2 m. What is the length of the actual field?

☐ A. 2 m

☐ B. 7.5 m

☐ C. 15 m

☐ D. 30 m

5) An angle is 3 times its complement. What is the measure of the larger angle?

☐ A. 67.5°

☐ B. 45°

☐ C. 22.5°

☐ D. 90°

6) A model rocket is 24 inches tall. The actual rocket is 60 feet tall. What is the scale factor of the model?

☐ A. 1 : 10

☐ B. 1 : 30

☐ C. 1 : 60

☐ D. 1 : 120



- 7) A circle has diameter 20 ft. What is its circumference to the nearest tenth? Use $\pi \approx 3.14$.
- ☐ A. 31.4 ft ☐ C. 125.6 ft
☐ B. 62.8 ft ☐ D. 314 ft
- 8) A gardener plants flowers in rows at a density of $\frac{3}{4}$ flower per inch. How many flowers are planted across a row that is 16 inches long?
- ☐ A. 9 flowers ☐ C. 16 flowers
☐ B. 12 flowers ☐ D. 21.3 flowers
- 9) A square pyramid with base side 8 cm and height 10 cm is sliced perpendicular to its base, passing through the apex and the center of the base. What is the shape of the cross-section?
- ☐ A. Equilateral triangle ☐ C. Right triangle
☐ B. Isosceles triangle ☐ D. Scalene triangle



Scan me!
For more practice
& answers

Pennsylvania PSSA 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 Pennsylvania PSSA practice test.



Scan me!
For more practice
& answers

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.NS.1-7.NS.3) A decrease or drop is represented by a negative number. A 20-degree drop is -20 .
- 2) **Choice D is correct.** (7.RP.3) Daily rate for 5 days: $40 \times 5 = \$200$. Insurance premium: $0.15 \times 200 = \$30$. Total: $200 + 30 = \$230$.
- 3) **Choice D is correct.** (7.SP.6) Experimental probability = $\frac{\text{favorable outcomes}}{\text{total trials}}$. Here, the denominator 90 represents the total number of rolls.
- 4) **Choice A is correct.** (7.G.4-7.G.6) $1 \text{ m} = 100 \text{ cm}$, so $1 \text{ m}^3 = (100)^3 = 1,000,000 \text{ cm}^3 = 10^6 \text{ cm}^3$. Thus $2 \text{ m}^3 = 2 \times 10^6 \text{ cm}^3$.
- 5) **Choice B is correct.** (7.G.4-7.G.6) A radius has one endpoint at the center and one on the circle, not both on the circle, so it is not a chord.
- 6) **Choice B is correct.** (7.SP.5-7.SP.8) $P(\text{not like}) = 1 - \frac{7}{8} = \frac{1}{8}$. Expected: $\frac{1}{8} \times 80 = 10$.
- 7) **Choice C is correct.** (7.RP.3) Interest: $3450 - 3000 = \$450$. $450 = 3000 \times r \times 3 \Rightarrow 450 = 9000r \Rightarrow r = 0.05 = 5\%$.
- 8) **Choice D is correct.** (7.RP.3) Discount amount = $96 - 57.60 = \$38.40$. Percent = $(38.40/96) \times 100 = 40\%$.
- 9) **Choice D is correct.** (7.NS.1b) If $-9 + x = 4$, then $x = 4 - (-9) = 4 + 9 = 13$. Check: $-9 + 13 = 4$ ✓.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) $150 \text{ m} = 15000 \text{ cm}$. Divide by scale: $15000 \div 500 = 30 \text{ cm}$.
- 11) **Choice C is correct.** (7.RP.3) If $12 = 0.15 \times n$, then $n = \frac{12}{0.15} = 80$.
- 12) **Choice D is correct.** (7.RP.1-7.RP.3) Proportional relationship: cost equals constant times pounds. Form is $y = kx$, so $c = 2.5p$.
- 13) **The correct answer is 36.** (7.SP.5-7.SP.8) First spinner: 6 outcomes. Second spinner: 6 outcomes. Total: $6 \times 6 = 36$ outcomes.
- 14) **The correct answer is 35.** (7.RP.1-7.RP.3) Ratio 2 : 5: if juice = 14, then $\frac{2}{5} = \frac{14}{x}$. Cross multiply: $2x = 70$, so $x = 35$ cups water.
- 15) **Choice D is correct.** (7.RP.3) Using the proportion $\frac{60}{100} = \frac{x}{50}$, cross-multiply: $x = 30$ items.
- 16) **Choice A is correct.** (7.NS.1-7.NS.3) Collected: $150.50 + 225.75 = 376.25$. Left: $376.25 - 180.25 = 196.00$ dollars.
- 17) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute the negative: $7a + 9 - 3a + 4 = (7a - 3a) + (9 + 4) = 4a + 13$.
- 18) **Choice D is correct.** (7.EE.1-7.EE.2) Correct matches: I (Product), II (Power), III (Quotient). Choice D correctly identifies the Quotient Rule for $\frac{x^{20}}{x^8} = x^{12}$.
- 19) **Choice B is correct.** (7.G.1-7.G.5) Original scale 1:2 means $1 \text{ cm} = 2 \text{ km}$. New scale 1:1 means $1 \text{ cm} = 1 \text{ km}$. The real-world distance per cm is halved, so the drawing must double in size. Scale factor ratio: $1 \div 2 = 0.5$, reciprocal shrink = 2. New dimensions: $7 \times 2 = 14 \text{ cm}$ and $4 \times 2 = 8 \text{ cm}$.
- 20) **The correct answer is A,C.** (7.G.4-7.G.6) Option A is correct (60 m^2). Option C is correct (18 m^2). The true total is $60 + 18 = 78 \text{ m}^2$, so D and
- 21) **Choice C is correct.** (7.G.1-7.G.5) Let the smaller angle be x . Then $x + (x + 15) = 180^\circ$, so $2x = 165^\circ$ and $x = 82.5^\circ$.
- 22) **The correct answer is 0.** (7.G.1-7.G.5) Compute $169 - (25 + 144) = 0$. This indicates the triangle is a right triangle.
- 23) **Choice D is correct.** (7.RP.1-7.RP.3) Unit price = $\frac{\text{cost}}{\text{weight}} = \frac{4}{2/5} = 4 \times \frac{5}{2} = 10$ \$ per pound.
- 24) **Choice D is correct.** (7.RP.1-7.RP.3) For $y = 3x$, the slope is 3. The red line passes through (1, 3), which satisfies $y = 3(1) = 3$.
- 25) **Choice C is correct.** (7.NS.1-7.NS.3) $0.000000125 = 1.25 \times 10^{-9}$. Move decimal 9 places right to reach first nonzero digit.
- 26) **Choice C is correct.** (7.EE.3-7.EE.4) Subtract 10: $-3x = -9$. Divide by -3 : $x = 3$.
- 27) **Choice A is correct.** (7.G.1-7.G.5) A 180° rotation maps $(x, y) \rightarrow (-x, -y)$. So $(-2, -4) \rightarrow (2, 4)$.
- 28) **Choice B is correct.** (7.SP.5-7.SP.8) $P(\text{not blue}) = 1 - P(\text{blue}) = 1 - 0.3 = 0.7$.
- 29) **Choice D is correct.** (7.NS.2) Negative times negative equals positive. $-7 \times (-3) = 21$.
- 30) **Choice C is correct.** (7.NS.1-7.NS.3) If area = 196, then $s^2 = 196$, so $s = \sqrt{196} = 14$.



Scan me!
For more practice
& answers

Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

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

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **9** 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:

9 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](https://www.testinar.com/math7)

FOR MORE PRACTICE TESTS AND LEARNING RESOURCES.



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY