

7 Delaware DeSSA Grade 7 Math Practice Tests



ONLINE

7 PRINTED TESTS + 2 ONLINE TESTS

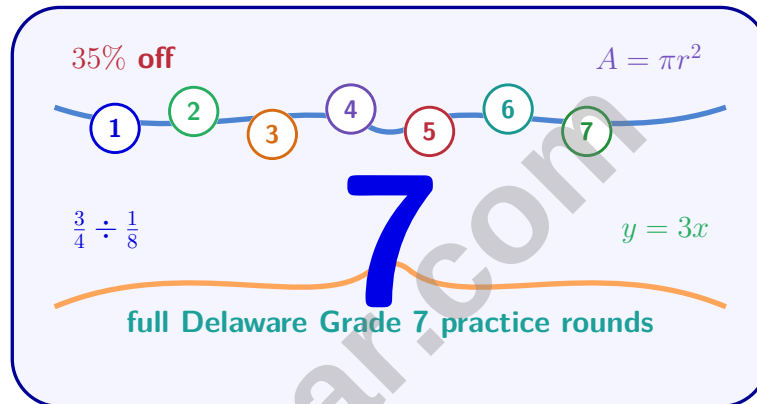


**Standards Aligned Problem Solving
For Comprehensive Assessment Programs**



8 Delaware DeSSA Grade 7 Math Practice Tests

Skill-building review for Delaware Grade 7 proportional relationships, expressions, geometry, data analysis, and compound probability



Eight complete 40-question Grade 7 DeSSA 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, Delaware Grade 7 Problem Solver!

Eight focused rounds for sharper DeSSA math thinking

This book gives you seven full Grade 7 DeSSA 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 Delaware 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.

Delaware 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 DeSSA 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.

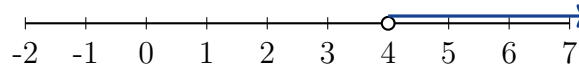


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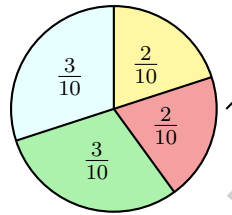
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- 1) Marco solved the inequality $2x + 3 > 11$ and got $x > 4$. Which number line correctly shows his solution?



- ☐ A. Closed circle at 4 pointing right ☐ C. Open circle at 4 pointing right
☐ B. Open circle at 4 pointing left ☐ D. Closed circle at 4 pointing left



2)

A spinner with four unequal sections is spun 350 times. Section A has probability $\frac{3}{10}$ and Section B has probability $\frac{2}{10}$. How many times would you expect to see either Section A or Section B?

- ☐ A. 70 times ☐ C. 140 times
☐ B. 105 times ☐ D. 175 times
- 3) What is $2\frac{1}{2} \times 4$?

- ☐ A. 8 ☐ C. 10
☐ B. 9 ☐ D. 12



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Service Fee Comparison

**Bank A: \$5 monthly + \$0.50 per
withdrawal**

**Bank B: \$8 monthly, unlimited
withdrawals**

4)

If a customer makes 10 withdrawals per month, which bank is cheaper?

- ☐ A. Bank A
 ☐ C. They cost the same
☐ B. It depends on the withdrawal amount
 ☐ D. Bank B

5) A \$1,000 investment at $r\%$ annual compound interest triples after 2 years. Which equation gives the interest rate?

- ☐ A. $1000(1 + r) = 3000$
☐ C. $1000 + 2r = 3000$
☐ B. $1000(1 + r)^2 = 3000$
☐ D. $1000 \times r^2 = 3000$

6) A bank account starts with a credit of \$50. After a debit of \$50, what is the account balance?

- ☐ A. \$100 (adds both amounts instead of subtracting)
 ☐ C. $-\$50$ (records only the debit)
☐ B. \$50 (ignores the debit)
 ☐ D. \$0 (correct; opposites sum to zero)



7) Calculate $-47 + (-26)$.

☐ A. -73

☐ B. -21

☐ C. 21

☐ D. 73

8) A cube has edge length 7 ft. What is the surface area?

☐ A. 49 ft^2

☐ B. 98 ft^2

☐ C. 196 ft^2

☐ D. 294 ft^2

9) Simplify: $-2n - 3n + n$

☐ A. $-4n$

☐ B. $-6n$

☐ C. $4n$

☐ D. $-2n$

10) Factor out the GCF from $30x - 18y + 6$:

☐ A. $6(5x - 3y + 1)$

☐ B. $6(5x - 3y)$

☐ C. $3(10x - 6y + 2)$

☐ D. $30(x - y + 0.2)$

11) The difference between two integers is -9 . If one integer is 4, what is the other integer? (Hint: difference means subtract.)

12) Solve: $\frac{2x-1}{3} \leq 5$

☐ A. $x \leq 8$

☐ B. $x \leq \frac{16}{2}$

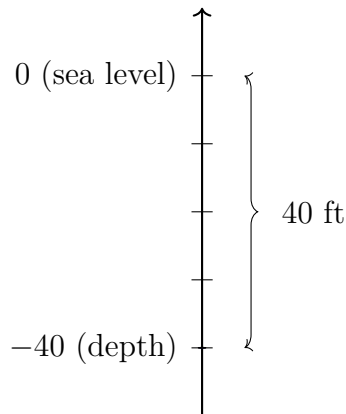
☐ C. $x \leq 7$

☐ D. $x > 8$



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- 1) A scuba diver descends 40 feet below sea level. Which integer represents this depth?



- ☐ A. 40 (ignores direction/below sea level)
☐ B. -80 (double the depth)
☐ C. 0 (at sea level, not below)
☐ D. -40 (correct; below is negative)
- 2) Two histograms compare the quiz scores of morning and afternoon classes. The morning class shows bars centered around 85–90, while the afternoon class shows bars centered around 75–80. What does this suggest?

- ☐ A. Morning students scored higher on average
☐ B. Afternoon students are smarter
☐ C. Both classes performed equally well
☐ D. Quiz difficulty was higher for morning students

- 3) The stem-and-leaf plot shows:

Stem	Leaves
10	1, 5, 7
11	2, 3, 8, 9
12	0, 4, 6

What is the mode?

- ☐ A. 112
☐ B. 118
☐ C. 119
☐ D. No mode

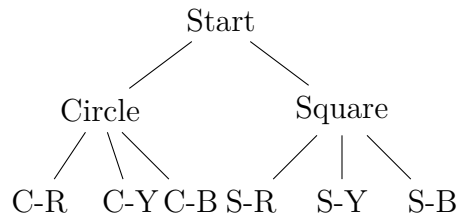


- 4) A triangular prism container is filled with water. The triangular base has legs 8 cm and 6 cm. If the container is 15 cm deep, what is the volume of water it can hold?
- ☐ A. 120 cm^3 ☐ C. 360 cm^3
☐ B. 240 cm^3 ☐ D. 720 cm^3
- 5) A circle has a radius of 5 inches. What is its diameter?
- ☐ A. 2.5 inches ☐ C. 10 inches
☐ B. 5 inches ☐ D. 15 inches
- 6) Three events have probabilities: Event A = $\frac{1}{2}$, Event B = 0.6, Event C = 55%. Which event is most likely?
- ☐ A. Event A ☐ C. Event C
☐ B. Event B ☐ D. Events A and C are equally likely
- 7) A rectangular prism has dimensions 6 cm $\times$ 4 cm $\times$ 3 cm. What is its surface area?
- ☐ A. 72 cm^2 ☐ C. 144 cm^2
☐ B. 108 cm^2 ☐ D. 216 cm^2
- 8) Simplify: $8a + 5b - 3a - 2b$
- ☐ A. $5a + 3b$ ☐ C. $5a + 7b$
☐ B. $11a + 3b$ ☐ D. $16ab$



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- 1) A tree diagram shows all outcomes for selecting a shape (Circle or Square) and a color (Red, Yellow, or Blue). How many final branches should the tree have?



- ☐ A. 2 branches
 ☐ C. 5 branches
☐ B. 3 branches
 ☐ D. 6 branches
- 2) A toy car is $\frac{1}{10}$ the size of a real car. If the toy is 8 inches long, how long is the real car?
- ☐ A. 0.8 feet
 ☐ C. 6.67 feet
☐ B. 4 feet
 ☐ D. 80 inches
- 3) A student answered 42 out of 50 questions correctly. What percent is this?
- ☐ A. 42%
 ☐ C. 78%
☐ B. 50%
 ☐ D. 84%
- 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%

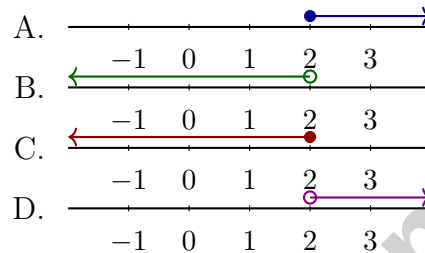


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- 5) A rectangular prism has length 12 in, width 6 in, and height 5 in. Find the surface area.

☐ A. 360 in^2 ☐ C. 258 in^2 ☐ B. 324 in^2 ☐ D. 180 in^2

- 6) Which number line represents $x \leq 2$?



- 7) A phone plan costs \$25 per month plus \$0.10 per text message. In one month, the bill is \$47. How many text messages were sent?

☐ A. 220 texts☐ C. 720 texts☐ B. 470 texts☐ D. 750 texts

- 8) A photograph is enlarged using a scale of 1 : 3 (meaning the enlargement is 3 times larger). If the original photo is 4 inches wide, how wide is the enlargement?

☐ A. 8 inches☐ C. 12 inches☐ B. 9 inches☐ D. 15 inches

- 9) A cone is sliced horizontally (parallel to its circular base). What is the shape of the cross-section?

☐ A. Rectangle☐ C. Circle☐ B. Triangle☐ D. Ellipse

Delaware System of Student 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 Delaware System of Student Assessments practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.EE.4b) Since $x > 4$ is a strict inequality, use an open circle at 4 with the arrow pointing right toward larger values.
- 2) **Choice D is correct.** (7.SP.5-7.SP.8) Section A: $\frac{3}{10} \times 350 = 105$. Section B: $\frac{2}{10} \times 350 = 70$. Combined: $105 + 70 = 175$ times.
- 3) **Choice C is correct.** (7.NS.2) $2\frac{1}{2} = \frac{5}{2}$. So $\frac{5}{2} \times 4 = \frac{20}{2} = 10$.
- 4) **Choice D is correct.** (7.RP.3) Bank A: $5 + (0.50 \times 10) = 5 + 5 = \10 . Bank B: \$8. Bank B is cheaper at \$8.
- 5) **Choice B is correct.** (7.RP.3) With compound interest over 2 years: Final balance = $P(1 + r)^2$. Since $P = 1000$ and final = 3000 (tripled), the equation is $1000(1 + r)^2 = 3000$. (Note: A is wrong because it assumes 1 year; C is simple interest; D is not a compound formula.)
- 6) **Choice D is correct.** (7.NS.1-7.NS.3) The credit of +50 and debit of -50 are opposites and sum to zero. This demonstrates the additive inverse property: $50 + (-50) = 0$.
- 7) **Choice A is correct.** (7.NS.1b) Both numbers are negative. Add absolute values: $|-47| + |-26| = 47 + 26 = 73$. Keep the negative sign: $-47 + (-26) = -73$.
- 8) **Choice D is correct.** (7.G.4-7.G.6) $SA = 6s^2 = 6(7)^2 = 6(49) = 294 \text{ ft}^2$.
- 9) **Choice A is correct.** (7.EE.1) Combine: $(-2 - 3 + 1)n = -4n$.
- 10) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of coefficients 30, 18, 6 is 6. Factor: $30x - 18y + 6 = 6(5x - 3y + 1)$.
- 11) **The correct answer is 13.** (7.NS.1-7.NS.3) If the difference is $4 - x = -9$, then $x = 4 - (-9) = 4 + 9 = 13$. Check: $4 - 13 = -9$ ✓.
- 12) **Choice A is correct.** (7.EE.4b) Multiply by 3: $2x - 1 \leq 15$. Add 1: $2x \leq 16$. Divide by 2: $x \leq 8$.
- 13) **Choice C is correct.** (7.NS.1-7.NS.3) $6 \div \frac{2}{3} = 6 \times \frac{3}{2} = 9$.
- 14) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $6 - 2(2 + 1) = 6 - 2(3) = 6 - 6 = 0$.
- 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.EE.3-7.EE.4) Selling price = $45 \times 1.20 = 54$.
- 17) **Choice C is correct.** (7.G.1-7.G.5) Actual dimensions: 18 m $\times$ 12 m. Perimeter: $2(18 + 12) = 60$ m.
- 18) **Choice A is correct.** (7.G.1-7.G.5) Using similar cones: $\frac{r}{8} = \frac{10}{12}$, so $r = 8 \times \frac{10}{12} = \frac{80}{12} = \frac{20}{3}$ cm.
- 19) **Choice B is correct.** (7.G.1-7.G.5) The center of Rectangle 1 is (2, 3). Under a 180° rotation, it maps to (-2, -3), which is the center of Rectangle 2.
- 20) **Choice A is correct.** (7.G.4-7.G.6) $C_1 = 2\pi(3) = 18.84$ m; $C_2 = 2\pi(6) = 37.68$ m; difference = $37.68 - 18.84 = 18.84$ m. (B is half the difference; C is sum of both; D is incorrect product.)
- 21) **The correct answer is A,D.** (7.RP.1-7.RP.3) A and D are true. Relationship A ($y = 4x$) is proportional and has y -intercept 0. Relationship B has constant term 2, so it is not proportional and has y -intercept 2.
- 22) **Choice D is correct.** (7.G.4-7.G.6) Semicircle: $\frac{1}{2} \times 3.14 \times 64 = 100.48 \text{ m}^2$. Sector: $\frac{200^\circ}{360^\circ} \times 3.14 \times 64 = 111.73 \text{ m}^2$. Sector is larger.
- 23) **Choice B is correct.** (7.SP.1-7.SP.4) The population is the entire group being studied, which is the complete database of 50,000 customers. The sample is the 200 randomly selected customers.
- 24) **The correct answer is 6.** (7.RP.1-7.RP.3) Unit rate = $18 \div 3 = 6$ loaves per hour.
- 25) **Choice A is correct.** (7.SP.1-7.SP.4) Although Tigers have a higher mean (75% vs. 72%), the Sharks have much lower MAD (4% vs. 8%), indicating more consistent free-throw shooting.
- 26) **Choice B is correct.** (7.NS.1-7.NS.3) Common denominator is 12: $\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$.
- 27) **Choice D is correct.** (7.NS.2d) Divide $23 \div 40 = 0.575$. Since $40 = 2^3 \times 5$, it terminates in three decimal places.
- 28) **Choice B is correct.** (7.NS.1-7.NS.3) $\frac{7}{8} \times 64 = 7 \times 8 = 56$ gallons.
- 29) **Choice B is correct.** (7.NS.1-7.NS.3) $5^2 = 25$ and $6^2 = 36$. Since 32 is much closer to 36 than to 25, $\sqrt{32}$ is closer to 6 (approximately 5.66).



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 7 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 **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!



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY



2 ONLINE TESTS

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



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