Delaware DeSSA

GRADE 6 MATH PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

5 PRINTED TESTS

- Full-Length Practice Tests
- Realistic Questions
- Answer Key & Explanations

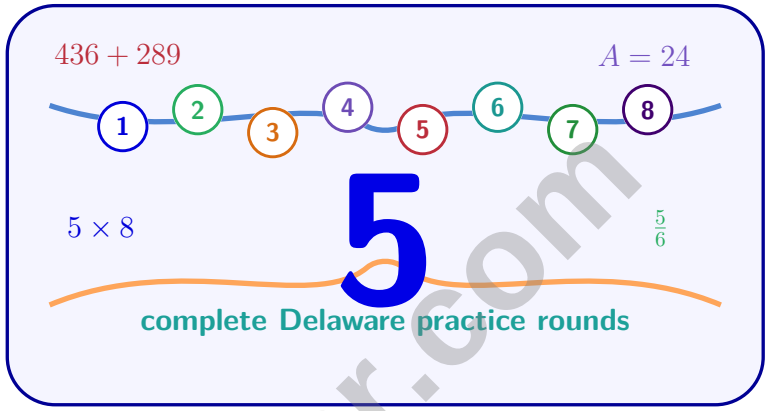
+ 2 ONLINE TESTS

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

PREPARE • PRACTICE • SUCCEED

5 Delaware DeSSA Grade 6 Math Practice Tests

Standards-Aligned Small-State Sharp Focus for Delaware System of Student Assessments



Five complete 40-question Grade 6 practice rounds for DeSSA, built for small-state sharp focus with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari

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Welcome, Delaware Math Explorer!

Eight focused rounds using small-state sharp focus

This book gives you five full Grade 6 practice tests for DeSSA. Each round uses bay paths, classroom routines, and tidy problem notes as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your Delaware Practice Promise

Keep the work compact and clear: underline the task, solve, then check the question again.

How to Use This Book

A five-session routine for small-state sharp focus

1. **Work in order.** Take one 40-question test at a time in a quiet place.
2. **Preview the skills.** Scan the quick review pages before beginning the first round.
3. **Correct actively.** Retry missed items before reading the full explanation.
4. **Mark confidence.** Put a small star beside problems where your plan felt strong.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

Delaware review rhythm: Use one test at a time, then turn missed items into a short practice list.

What Is Inside?

Eight DeSSA tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–2	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 3–4	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 5	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Small-state sharp focus means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

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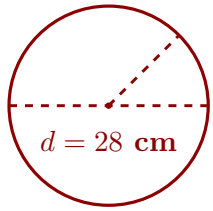


1)

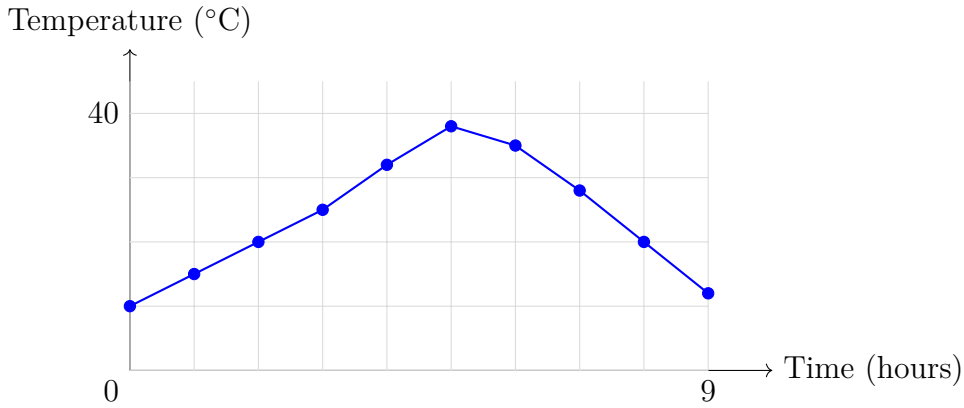
What is the approximate area of a circle with diameter 28 cm? Use $\pi \approx \frac{22}{7}$.

☐ A. 88 cm^2
☐ B. 264 cm^2
☐ C. 616 cm^2
☐ D. 1232 cm^2

2) Compute: $\frac{6}{7} \div \frac{2}{3}$

☐ A. $\frac{12}{14}$
☐ B. $\frac{9}{7}$
☐ C. $\frac{14}{18}$
☐ D. $\frac{4}{7}$

3)



This line graph shows how outdoor temperature changed from 6 AM to 3 PM. Which statement is TRUE?

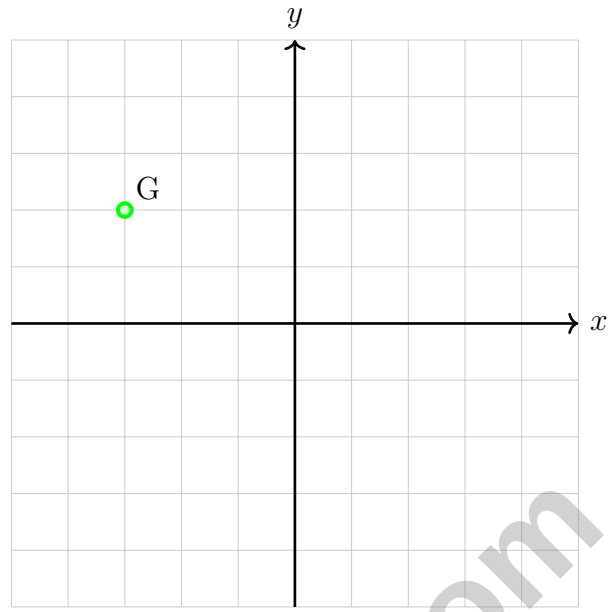
☐ A. Temperature peaked around noon (5 hours after start)

☐ B. Temperature decreased continuously all day

☐ C. Temperature was highest at 6 AM

☐ D. Temperature was constant throughout the day

4)



Point G is at $(-3, 2)$. It is reflected over the y-axis. What are the coordinates of G'?

5) Which pair of ratios is equivalent?

☐ A. 4 : 5 and 8 : 15
☐ B. 5 : 6 and 10 : 13
☐ C. 2 : 9 and 4 : 20
☐ D. 3 : 7 and 6 : 14

6) A ribbon is 36 inches long. How many yards is the ribbon? (Use 1 yard = 36 inches.)

☐ A. 1 yard
☐ B. 2 yards
☐ C. 3 yards
☐ D. 12 yards

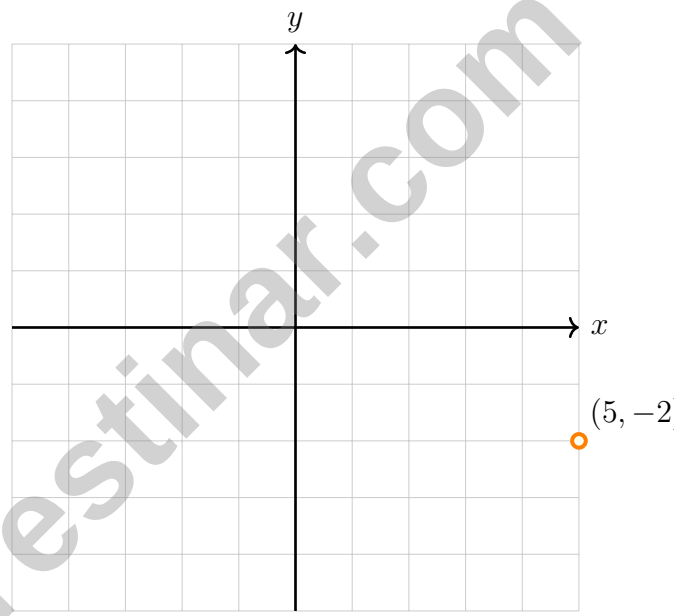
1) Compute: $10.5 - 4.75 + 2.1$

☐ A. 16.35
☐ B. 8.15
☐ C. 7.75
☐ D. 7.85

2) A car travels at a constant speed of 60 miles per hour. Which variable is *independent*?

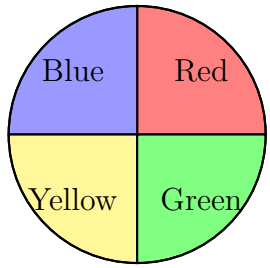
☐ A. Distance traveled
☐ B. Time driven
☐ C. Speed of the car
☐ D. Fuel consumption

3)



If point (a, b) is reflected over the y-axis, the image is at $(-a, b)$. Using this rule, what is the image of $(5, -2)$?

☐ A. $(-5, 2)$
☐ B. $(-5, -2)$
☐ C. $(5, -2)$
☐ D. $(5, 2)$



4)

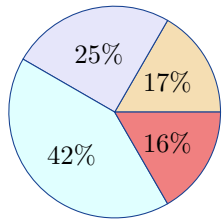
The spinner above is spun. Which probability is impossible?

☐ A. $P(\text{Red}) = 0.25$
☐ B. $P(\text{Blue}) = 0.25$
☐ C. $P(\text{Purple}) = 0.25$
☐ D. $P(\text{Yellow}) = 0.25$

5) A researcher plots quarterly sales (in thousands of dollars). When creating a stem-and-leaf plot from: $45, 52, 48, 61, 55, 58, 63$, which stems are needed?

Stem	Leaf
4	5, 8
5	2, 5, 8
6	1, 3

☐ A. Stems 4 and 5
☐ B. Stems 5 and 6
☐ C. Stems 4, 5, and 6
☐ D. Only stem 5



6)

A circle graph displays 500 survey responses. What is the central angle for the 42% section?

☐ A. 151.2°
☐ B. 144°
☐ C. 162°
☐ D. 168°

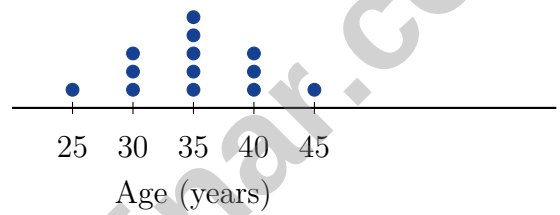
1) In a box plot, what does the left edge of the box represent?

☐ A. The minimum
☐ B. Q_1
☐ C. The median
☐ D. The mean

2) The MAD of Set X is 3.5 and the MAD of Set Y is 1.8. Which set has greater spread?

☐ A. Set X has greater spread.
☐ B. Set Y has greater spread.
☐ C. Both have the same spread.
☐ D. Cannot be determined from MAD alone.

3) A dot plot displays the ages of people at a yoga class. The distribution appears roughly symmetric with a peak at 35 years. This suggests:



☐ A. The mean is less than the median
☐ B. The mean cannot be determined from a dot plot
☐ C. The mean is greater than the median
☐ D. The mean is approximately equal to the median

4) A school has s students. It also has $s + 25$ staff members. If the school has 600 students, how many staff members does it have?

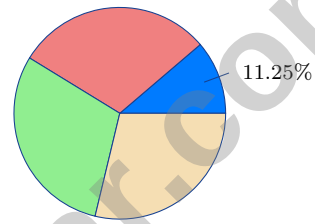
5) A jar contains 24 buttons: 9 red, 7 blue, and 8 yellow. If one button is chosen at random, what is the probability it is blue or yellow?

☐ A. $\frac{7}{24}$
☐ B. $\frac{8}{24}$
☐ C. $\frac{15}{24}$
☐ D. $\frac{16}{24}$

6) Raw data for number of books read by 8 students: $12, 18, 15, 12, 20, 15, 14, 19$. If you were to create a stem-and-leaf plot, how many leaves would be in stem 1?

☐ A. 5
☐ B. 6
☐ C. 7
☐ D. 8

7)



A park had 880 visitors. The circle graph shows 11.25% were there for a picnic. How many visitors were there for a picnic?

☐ A. 99
☐ B. 88
☐ C. 75
☐ D. 110

8) Solve for x: $x + 6 = 19$.

Delaware DeSSA Practice Test Answer Keys

How to use this Delaware DeSSA answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to small-state sharp focus
3. rework the problem before reading the full explanation, using this reminder: Keep the work compact and clear: underline the task, solve, then check the question again.

A calm Delaware correction routine turns every missed item into useful practice. Use one test at a time, then turn missed items into a short practice list.

Delaware Practice Test Answers and Explanations

Review the five printed DeSSA tests with focused, neat, and ready for the next round habits.

Practice Test 1 Answers and Explanations

1) **Choice C is correct.** 6.RP.A.1 Radius $r = \frac{28}{2} = 14$ cm. Area $= \pi r^2 \approx \frac{22}{7} \times 14^2 = \frac{22}{7} \times 196 = 22 \times 28 = 616$ cm^2.
2) **Choice B is correct.** 6.NS.A.1 $\frac{6}{7} \times \frac{3}{2} = \frac{18}{14} = \frac{9}{7}$.
3) **Choice A is correct.** 6.RP.A.3 The graph shows the line reaching its highest point at the 5-hour mark, which corresponds to noon. The other statements contradict the visual data.
4) **The correct answer is** $(3, 2)$**.** 6.NS.C.8 Reflection over the y-axis negates the x-coordinate: $(-3, 2) \to (3, 2)$.
5) **Choice D is correct.** 6.RP.A.3 Check: $6 : 14 = (6 \div 2) : (14 \div 2) = 3 : 7$. The other pairs are not equivalent.
6) **Choice A is correct.** 6.RP.A.3d Divide: $36 \div 36 = 1$ yard.
7) **Choice C is correct.** 6.RP.A.1 Simplify the first ratio in the pair: $4 : 8$ becomes $1 : 2$. Since $1 : 2$ is not the same as $1 : 3$, this pair is not equivalent.
8) **Choice A is correct.** 6.RP.A.3 Start with the order in the question: boys to girls is $10 : 15$. Divide both parts by 5: $10 \div 5 = 2$ and $15 \div 5 = 3$, so the ratio says for every 2 boys there are 3 girls.
9) **Choice D is correct.** 6.RP.A.3d Multiply the monthly rate by 12 months: $35 \times 12 = 420$ dollars per year.
10) **Choice B is correct.** 6.RP.A.3b $100 \div 25 = 4$ meters per second.
11) **Choice D is correct.** 6.RP.A.3 Table 1: $3 : 4$ and $6 : 8$ both equal $3 : 4$ (simplified). Table 2: $5 : 10 = 1 : 2$ (divide by 5) and $10 : 20 = 1 : 2$ (divide by 10). The ratios are different: $3 : 4 \neq 1 : 2$.
12) **Choice B is correct.** 6.RP.A.3c $\frac{20}{80} = \frac{1}{4} = \frac{25}{100} = 25\%$.
13) **Choice D is correct.** 6.RP.A.3c Discount amount is $\$1200 - \$900 = \$300$. Percent discount is $\frac{300}{1200} = \frac{1}{4} = 0.25 = 25\%$.
14) **Choice D is correct.** 6.NS.C.7d 6% of $\$2500 = 0.06 \times 2500 = \$150$.
15) **Choice B is correct.** 6.NS.C.7d For constant $k = 2.5$: $y/x = 2.5$. When $x = 6$: $y/6 = 2.5$, so $y = 6 \times 2.5 = 15$.
16) **Choice D is correct.** 6.EE.C.9 Food and utilities: $25\% + 20\% = 45\%$ of $\$2000 = 0.45 \times 2000 = \$900$.
17) **Choice D is correct.** 6.RP.A.3 Divide: 54 feet $\div$ 18 inches $= 3$ feet per inch.
18) **Choice A is correct.** 6.NS.B.2 $6{,}216 \div 38 = 163$ remainder 22. Verify: $38 \times 163 + 22 = 6{,}216$.
19) **Choice A is correct.** 6.NS.B.3 Subtract: \$34.50 - \$7.25 = \$27.25.
20) **Choice B is correct.** 6.NS.B.4 Since 7 and 11 are both prime and share no common factors, their LCM is their product: $7 \times 11 = 77$.
21) **Choice D is correct.** 6.NS.B.4 The student only multiplied $5 \times 3 = 15$ instead of distributing to both terms. The correct solution is $5(3 + 8) = 5 \cdot 3 + 5 \cdot 8 = 15 + 40 = 55$. The area model shows both parts, confirming both must be distributed to.
22) **The correct answer is Statements B, C, and E are correct: Time is the independent variable (you choose how long to run); the equation is $d = 8t$; and the constant rate is 8 mph..** 6.EE.C.9 Correct: B (time is independent—you control it), C (equation $d = 8t$ is correct), and E (the rate is indeed 8 mph). Incorrect: A (distance depends on time), D (reverses the relationship).
23) **The correct answer is** $\frac{3}{10}$**.** 6.NS.B.3 Total marbles $= 7 + 3 = 10$. Red marbles $= 3$. Probability $= \frac{3}{10}$. This fraction is already in lowest terms.
24) **Choice C is correct.** 6.NS.C.5 On a number line, negative numbers are to the left of zero. -5 is located five units to the left of zero.
25) **Choice A is correct.** 6.NS.C.7c The opposite of a negative number is its positive version. The opposite of -15 is 15.
26) **Choice B is correct.** 6.NS.C.6c Midpoint $= \frac{-2.5+(-1.5)}{2} = \frac{-4}{2} = -2$.
27) **Choice D is correct.** 6.NS.C.8 Point S is at $(2, -4)$ and S' is at $(2, 4)$. Both have $x = 2$. Reflection across the x-axis keeps the x-coordinate the same.

Hi, Math Pilot!

◇ 5 flights done in your math airplane. You have flown through smooth skies and bumpy clouds. You are a real pilot now. ◇

⋆ **Pilots know:** a good check before takeoff makes a smooth flight. Before each problem, do your check: read, plan, solve, verify. ⋆

Pilot Skills

- **Pre-Flight:** You read the question carefully.
- **Steering:** You pick the right strategy.
- **Smooth Flight:** You stay calm in long tests.
- **Landing:** You always check your final answer.

Pilot tip: on test day, take off one problem at a time. Trust your training. You earned your wings!

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

Jay Daie

Your Math Pilot

PRACTICE MORE.
ACHIEVE MORE.

This book provides **5 full-length Math practice tests** designed to help Grade 6 students strengthen their skills, build confidence, and excel on standardized assessments.

Each test is carefully crafted to reflect the latest standards and covers a wide range of math topics with realistic questions and detailed answer explanations.

BUILD CONFIDENCE
Practice builds familiarity and reduces test anxiety.

IMPROVE ACCURACY
Sharpen skills and avoid common mistakes.

ACHIEVE SUCCESS
Consistent practice leads to greater results.

WHAT'S INSIDE?

5 Full-Length Practice Tests
Realistic tests designed to mirror actual exam conditions.

Realistic Questions
A variety of question types to strengthen problem-solving skills.

Answer Keys & Explanations
Detailed solutions to help students learn and improve.

Performance Tracking
Track progress and identify areas that need improvement.

Comprehensive Coverage
All essential topics aligned with Grade 6 math standards.

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FOR MORE PRACTICE TESTS AND LEARNING RESOURCES

PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY

PREPARE TODAY. SUCCEED TOMORROW!