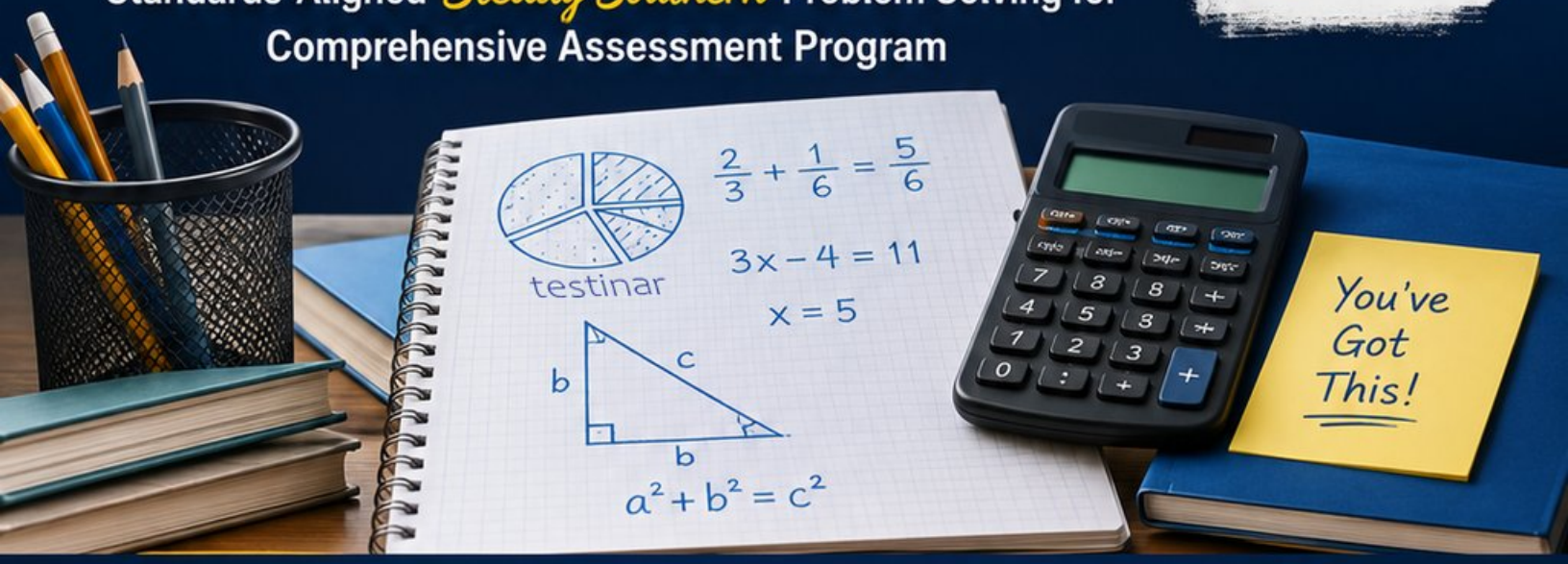
8 North Dakota NDSA GRADE 6 MATH PRACTICE TESTS

8 PRINTED TESTS + 2 ONLINE TESTS

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

Standards-Aligned *Steady Southern* Problem Solving for Comprehensive Assessment Program



BUILT FOR ACAP SUCCESS

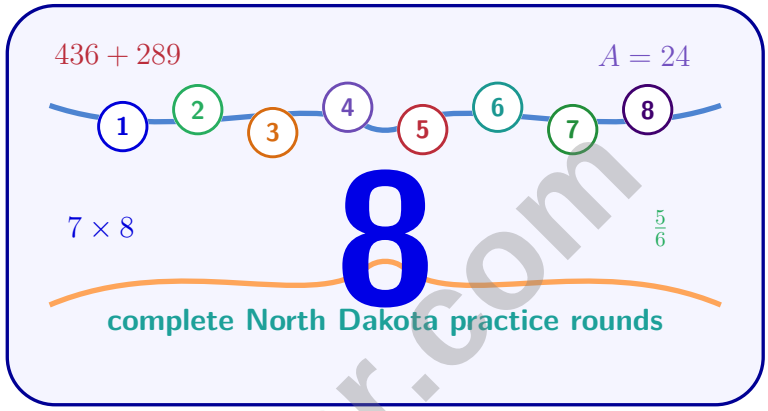
REALISTIC TESTS & QUESTION TYPES

STRENGTHEN MATH SKILLS

REVIEW, PRACTICE, AND IMPROVE

8 North Dakota NDSA Grade 6 Math Practice Tests

Standards-Aligned Northern Plains Test Focus for North Dakota State Assessment



Eight complete 40-question Grade 6 practice rounds for NDSA, built for northern plains test 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, North Dakota Math Explorer!

Eight focused rounds using northern plains test focus

This book gives you eight full Grade 6 practice tests for NDSA. Each round uses prairie roads, river breaks, and patient calculation as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your North Dakota Practice Promise

Keep the work steady: read, set up, solve, and compare the answer to the question.

How to Use This Book

A eight-session routine for northern plains test focus

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

North Dakota review rhythm: Use each test as a field note, then practice the skills that need the most attention.

What Is Inside?

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

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Tests 7–8	Final stamina rounds 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. Northern plains test focus means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

Table of Contents

1) Three phone plans offer different rates: Plan A: 500 minutes for \$35, Plan B: 800 minutes for \$50, Plan C: 1000 minutes for \$60. Which plan has the lowest cost per minute?

Plan	Minutes	Cost (\$)	Cost per Min
A	500	35	\$0.07
B	800	50	\$0.0625
C	1000	60	\$0.06

☐ A. Plan A (\$0.07 per min)
☐ B. Plan B (\$0.0625 per min)
☐ C. Plan C (\$0.06 per min)
☐ D. Plans B and C are tied

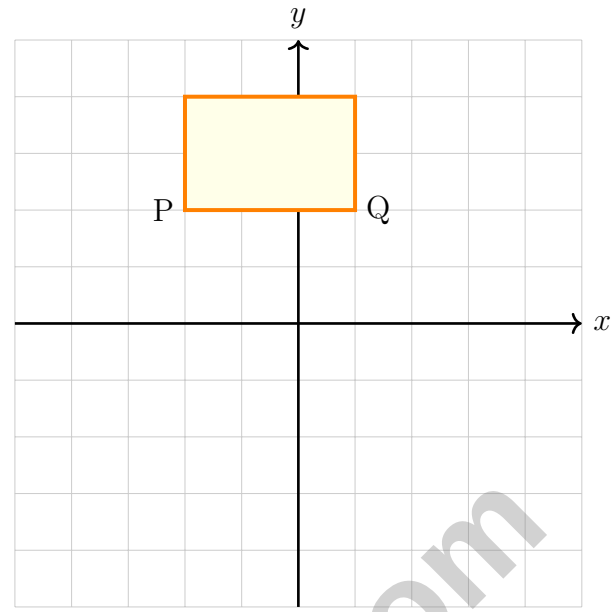
2) A minimum wage in a region is at least \$15 per hour. Which inequality represents this?

☐ A. $w > 15$
☐ B. $w \geq 15$
☐ C. $w < 15$
☐ D. $w \leq 15$

3) A plumber charges a fixed fee of \$50 plus \$60 per hour. If h is the hours worked and C is total cost, which equation represents this?

☐ A. $C = 50h + 60$
☐ B. $h = 60C + 50$
☐ C. $C = 110h$
☐ D. $C = 60h + 50$

4)



Rectangle $PQRS$ is shown. If it is reflected over the x-axis, the vertex $Q(1, 2)$ will move to which point?

☐ A. $(1, -2)$
☐ B. $(-1, 2)$
☐ C. $(1, 2)$
☐ D. $(-1, -2)$

5) After simplifying $6m + 2n - 3m + 4n + m$, what is the coefficient of n?

6) Which is a non-statistical question?

☐ A. How many inches tall are sixth graders in this school?
☐ B. How many wheels does a bicycle have?
☐ C. What are the birth months of students in our class?
☐ D. How much money do students spend on snacks each week?

7) Write $\frac{3}{4}$ as a decimal.

8) Which summary statistic is most resistant to outliers?

☐ A. Mean
☐ B. Median
☐ C. Range
☐ D. Standard deviation

9) A teacher uses a histogram to compare test scores. The histogram has intervals: 50–60 (freq 2), 60–70 (freq 5), 70–80 (freq 8), 80–90 (freq 4), 90–100 (freq 1). What percentage of students scored between 70 and 90?

☐ A. 48%
☐ B. 52%
☐ C. 60%
☐ D. 80%

10) Which number has the greatest absolute value?

☐ A. -2.3
☐ B. -4.1
☐ C. 3.9
☐ D. 1.8

1) Which integer is closest to zero on a number line?

☐ A. -5
☐ B. -8
☐ C. 4
☐ D. -1

2) Which net cannot fold into a cube without overlapping faces?

☐ A. T-shaped net with 6 squares
☐ B. Zigzag with 6 squares
☐ C. Cross with 6 squares
☐ D. Straight line of 6 squares

3) An apple costs a cents. A pear costs 15 cents. If $a = 20$, what is the total cost of one apple and one pear?

☐ A. 5 cents
☐ B. 300 cents
☐ C. 15 cents
☐ D. 35 cents

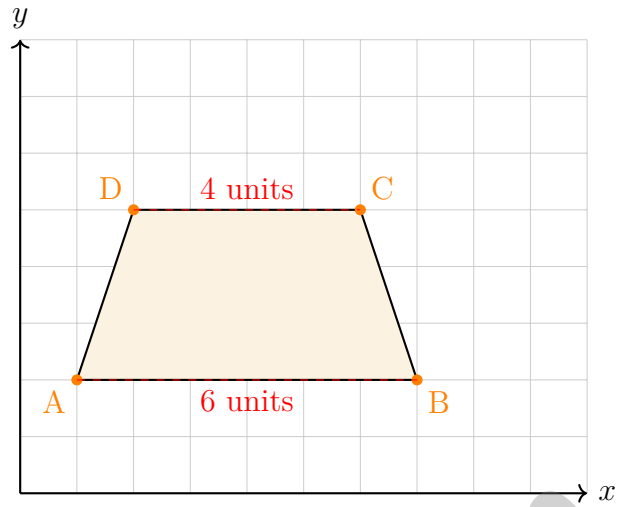
4) Which inequality represents "all numbers less than 5"?

☐ A. $x \leq 5$
☐ B. $x < 5$
☐ C. $x > 5$
☐ D. $x \geq 5$

5) A car uses 8 gallons of gas to travel 160 miles. At this rate, how many gallons are needed to travel 320 miles?

☐ A. 10 gallons
☐ B. 12 gallons
☐ C. 16 gallons
☐ D. 20 gallons

6)



This trapezoid has bases of 6 and 4 units and height 3 units. What is its area?

☐ A. 12 square units
☐ B. 24 square units
☐ C. 18 square units
☐ D. 15 square units

7) Two datasets have the same mean of 50 but different standard deviations: Dataset A has SD = 3, Dataset B has SD = 12. What is the most significant difference?

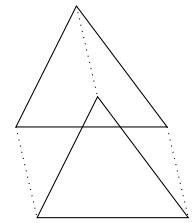
☐ A. Dataset A is larger.
☐ B. Dataset B is larger.
☐ C. Dataset A is more tightly clustered.
☐ D. They are essentially identical.

8) Check whether $x = 3$ is a solution to $\frac{x}{3} = 1$.

☐ A. Yes, because $\frac{3}{3} = 1$
☐ B. No, because $3 \times 3 = 9$
☐ C. No, because $3 - 3 = 0$
☐ D. Yes, because $3 + 1 = 4$

1) A triangular prism has a base with sides 6 cm, 7 cm, and 7 cm. The height of the prism is 9 cm. What is the lateral surface area?

Height = 9 cm



Perimeter of base = 20 cm

☐ A. 108 cm^2
☐ B. 144 cm^2
☐ C. 180 cm^2
☐ D. 216 cm^2

2) A bag of flour weighs 5.4 kg. You divide it equally among 6 recipes. How much flour does each recipe use (in kilograms)?

3) A school is organizing a field day. Events are scheduled every 20 minutes for one activity and every 30 minutes for another. If both activities start at the same time, when will they start together again? (Give answer in minutes.)

4)

Number of Pizzas	Total Cost ($)
1	15
2	30
3	45
5	x

The table shows the relationship between pizzas and cost. What is the value of x?

☐ A. 45
☐ B. 60
☐ C. 90
☐ D. 75

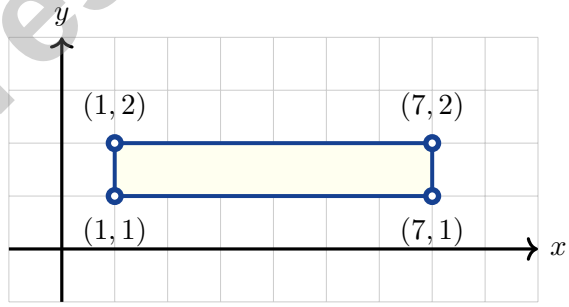
5) A student needs to score more than 80% to pass. Which inequality represents passing scores?

☐ A. $s \leq 80$
☐ B. $s < 80$
☐ C. $s > 80$
☐ D. $s \geq 80$

6) A plant grows 3 cm per week. If w is the number of weeks and h is the height in centimeters, write the equation.

☐ A. $h = 3w + 3$
☐ B. $h = 3w$
☐ C. $w = 3h$
☐ D. $h = w + 3$

7)



What is the length of the top side of this rectangle from $(1, 2)$ to $(7, 2)$?

☐ A. 4 units
☐ B. 5 units
☐ C. 6 units
☐ D. 7 units

North Dakota NDSA Practice Test Answer Keys

How to use this North Dakota NDSA 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 northern plains test focus
3. rework the problem before reading the full explanation, using this reminder: Keep the work steady: read, set up, solve, and compare the answer to the question.

A calm North Dakota correction routine turns every missed item into useful practice. Use each test as a field note, then practice the skills that need the most attention.

North Dakota Practice Test Answers and Explanations

Review the eight printed NDSA tests with patient, focused, and ready for the next checkpoint habits.

Practice Test 1 Answers and Explanations

1) **Choice C is correct.** 6.AR.RP.3 Plan A: $35 \div 500 = 0.07$ per min. Plan B: $50 \div 800 = 0.0625$ per min. Plan C: $60 \div 1000 = 0.06$ per min. Plan C is lowest.
2) **Choice B is correct.** 6.AR.EE.6 "At least" means "greater than or equal to," so $w \geq 15$.
3) **Choice D is correct.** 6.AR.RP.3 Total cost equals the hourly rate ($60) times hours plus the fixed fee ($50): $C = 60h + 50$.
4) **Choice A is correct.** 6.GM.GF.2 Reflection over the x-axis: $Q(1, 2) \to Q'(1, -2)$.
5) **The correct answer is** 6. 6.AR.EE.3 Combine n terms: $2n + 4n = 6n$.
6) **Choice B is correct.** 6.DPS.D.1 This has a single fixed answer: 2. The other questions all involve variability and require collecting data from multiple sources or people.
7) **The correct answer is** 0.75. 6.AR.EE.6 $3 \div 4 = 0.75$.
8) **Choice B is correct.** 6.DPS.D.1 The median is the middle value and is unaffected by extreme outliers. The mean, range, and standard deviation all respond strongly to outliers.
9) **Choice C is correct.** 6.AR.RP.3 Students scoring 70–80 (8) + 80–90 (4) = 12 students. Total students = 2 + 5 + 8 + 4 + 1 = 20. Percentage = $\frac{12}{20} = 0.6 = 60\%$.
10) **Choice B is correct.** 6.NO.NS.1 Absolute values: $|-2.3| = 2.3$, $|-4.1| = 4.1$, $|3.9| = 3.9$, $|1.8| = 1.8$. The greatest is 4.1.
11) **Choice D is correct.** 6.GM.GF.2 The points share the same y-coordinate (2), so the distance is the difference of the x-coordinates: $|5 - 1| = 4$ units.
12) **Choice C is correct.** 6.AR.EE.4 Add 8 to both sides: $x = 6 + 8 = 14$.
13) **Choice D is correct.** 6.GM.AV.1 $54 = \frac{1}{2} \times b \times 9 \Rightarrow b = 12$ in.
14) **Choice C is correct.** 6.GM.AV.1 Area of the parallelogram $= 40 \times 15 = 600$ m^2.
15) **Choice A is correct.** 6.DPS.D.4 Without 200: sum $= 5 + 7 + 8 + 9 + 10 = 39$, mean $= 39/5 = 7.8$. Decrease: $39.83 - 7.8 = 32.03$. The outlier dramatically pulled the mean up.
16) **Choice B is correct.** 6.DPS.D.2 With 6 values, median is the average of the 3rd and 4th: $\frac{17 + 19}{2} = 18$.
17) **Choice A is correct.** 6.DPS.D.2 Distances: $|5 - 7.5| = 2.5$, $|6 - 7.5| = 1.5$, $|7 - 7.5| = 0.5$, $|7 - 7.5| = 0.5$, $|8 - 7.5| = 0.5$, $|8 - 7.5| = 0.5$, $|9 - 7.5| = 1.5$, $|10 - 7.5| = 2.5$. Sum = 10. MAD = $10/8 = 1.25$.
18) **Choice C is correct.** 6.DPS.D.4 Students scoring 80 or above: $11 + 6 + 2 = 19$ students.
19) **Choice D is correct.** 6.AR.RP.1 Adding a value of 45 (larger than the current max of 40) directly changes the maximum from 40 to 45. The other quartiles and median are determined by position and would not change with one additional data point.
20) **Choice A is correct.** 6.NO.O.3 Probability of failing $= 1 - \frac{4}{5} = \frac{1}{5}$.
21) **The correct answer is** $1.5 \times 2.4 = 3.6$ **(two decimal places total) and** $4.8 \div 0.4 = 12$ **(shift both left by one place:** $48 \div 4 = 12$**)..** 6.NO.O.2 B is correct because $15 \times 24 = 360$ and the factors have two decimal places total, giving 3.6. D is correct because $4.8 \div 0.4 = 48 \div 4 = 12$. A, C, and E have incorrect decimal placement.
22) **Choice D is correct.** 6.DPS.D.1 Boys: 601, 604, 607; range = 6. Girls: 602, 603, 605, 608; range = 6. Both ranges equal 6.
23) **Choice A is correct.** 6.NO.O.3 26.25% of 640 is $0.2625 \times 640 = 168$ items.
24) **Choice A is correct.** 6.AR.RP.4 Shaded: 50 squares (5 rows × 10 cols). Unshaded: 50 squares out of 100 $= \frac{50}{100} = \frac{1}{2}$ in simplest form.

Hi, Math Champion!

◇ You trained hard! 8 full practice tests is real practice. Your math game is way better now than when you started. ◇

⋆ **Coach's truth:** kids who practice get better. You practiced. You got better. That's how it works! ⋆

Your Game Stats

- **Energy:** HIGH! You can finish a long test.
- **Smart Plays:** You know lots of strategies.
- **Calm Head:** You stay cool with hard problems.
- **Game-Day Ready:** You feel strong and prepared.

Coach's tip: the night before the test, get good sleep. Eat a good breakfast. Bring a sharp pencil. Trust your training!

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

Jay Daie

Your Math Coach

MASTER MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

Perfect for classroom use, homework, test preparation, and extra practice at home.

8 PRINTED TESTS

+

2 ONLINE TESTS

PERFECT FOR

- Classroom Practice
- Homework & Review
- Independent Learning
- Test Preparation
- Skill Reinforcement
- Building Confidence

PRACTICE TODAY. SUCCEED TOMORROW.

WHAT STUDENTS WILL GAIN

Stronger Math Skills

Build a solid foundation through targeted practice and review.

Better Problem Solving

Develop logical thinking and effective solution strategies.

Understand Key Concepts

Reinforce important math ideas aligned with standards.

Test Confidence

Get familiar with test formats and improve accuracy.

Achieve Success

Build confidence and perform your best on test day.

TOPICS COVERED

- Ratios & Rates
- The Number System
- Expressions & Equations
- Geometry
- Fractions & Decimals
- Percents
- Statistics & Probability
- Data Analysis
- Measurement & Conversions
- And More!

2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

MORE PRACTICE. GREATER RESULTS.

Give your child the tools needed to develop strong math skills, confidence, and a positive attitude toward learning.

8 FULL-LENGTH PRACTICE TESTS

2 ONLINE PRACTICE TESTS

DETAILED ANSWER EXPLANATIONS