

North Dakota

NDSA

GRADE 6

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



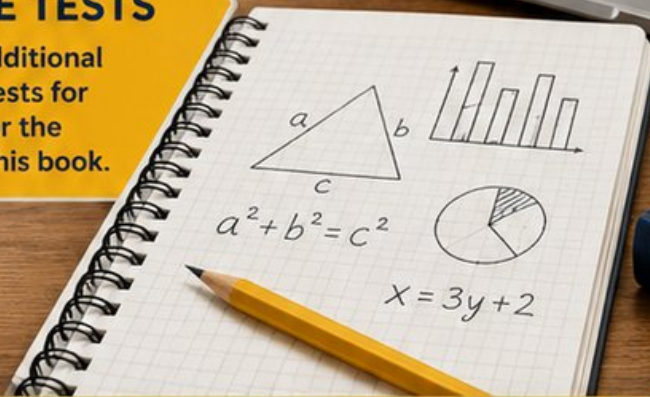
5 PRINTED TESTS

- ✓ 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 North Dakota NDSA Grade 6 Math Practice Tests

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

$436 + 289$ $A = 24$

1 2 3 4 5 6 7 8

5×8 $\frac{5}{6}$

5

complete North Dakota practice rounds

Five 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



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, North Dakota Math Explorer!

Eight focused rounds using northern plains test focus

This book gives you five 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.

Read

Plan

Check

How to Use This Book

A five-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 1–2	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. Northern plains test focus means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.

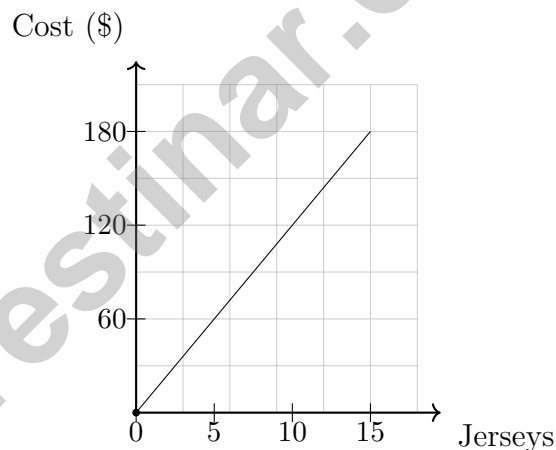


Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	29
★ Practice Test 3	_____	44
★ Practice Test 4	_____	62
★ Practice Test 5	_____	76
Practice Test Answer Keys	_____	93
Practice Test Answers and Explanations	_____	97

- 1) A student mistakenly uses the formula $A = \pi d^2$ instead of $A = \pi r^2$ for a circle with radius 3 inches and $\pi \approx 3.14$. What incorrect area would they calculate?
- A. 113.04 in² C. 56.52 in²
 B. 28.26 in² D. 9.42 in²
- 2) A store sells packs of pencils. 5 packs cost \$12.50, and 8 packs cost \$19.20. Which is the better deal per pack?
- A. 8 packs at \$2.40 per pack C. 5 packs at \$1.25 per pack
 B. 5 packs at \$2.50 per pack D. 8 packs at \$2.50 per pack
- 3) A soccer team buys jerseys at \$12 per jersey. The team orders 0, 5, 10, and 15 jerseys. Which graph best represents this proportional relationship?



- A. Vertical line C. Through origin; rate \$12
 B. Starts at (5, 60) D. Inverse relationship



4) Ina saves \$500 in year 1. In year 2, her savings increases by 20%. How much does she save in year 2?

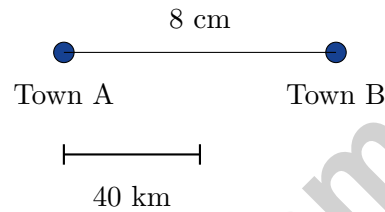
A. \$520

C. \$700

B. \$580

D. \$600

5) A map shows two towns with a distance between them. The scale bar below indicates the distance.



What is the actual distance between the towns?

A. 80 km

C. 160 km

B. 120 km

D. 200 km

6) A recipe calls for 2 cups of flour for every 3 cups of sugar. Which fraction represents the ratio of flour to the total amount of flour and sugar?

A. $\frac{2}{3}$

C. $\frac{2}{5}$

B. $\frac{3}{5}$

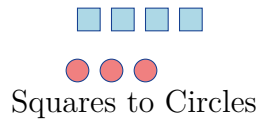
D. $\frac{3}{2}$

7) For 3, 5, 7, 9, 11, 13, 15, find the interquartile range.



Scan me!
For more practice
& answers

8) The diagram shows a pattern of squares and circles.



Which statement describes the ratio shown?

- A. For every 3 squares there are 4 circles.
- C. For every 3 squares there are 2 circles.
- B. For every 2 squares there are 3 circles.
- D. For every 4 squares there are 3 circles.

9)

Gallons	2	4	6
Miles	48	96	144

Based on the table, what is the rate in miles per gallon?

- A. 20 miles per gallon
- C. 48 miles per gallon
- B. 96 miles per gallon
- D. 24 miles per gallon

10) A fitness trainer gives personal training sessions. The table shows the rate of clients trained:

Clients Trained	Time (weeks)
5	2
10	4
?	6

- A. 12
- C. 15
- B. 13
- D. 18

- 4) Two box plots are shown for Classes A and B. Class A has a median of 78 and IQR of 12. Class B has a median of 82 and IQR of 8. Which class has more consistent scores?
- A. Class B, because it has a smaller IQR. C. Class A, because it has a higher median.
- B. Class A, because it has a larger IQR. D. They are equally consistent.
- 5) Store daily sales (in dollars): mean = \$500, median = \$480. Which day was likely a special event?
- A. A day with very low sales below the median C. A day with very high sales above the median
- B. A day with sales exactly at the mean D. Cannot be determined
- 6) Two fair coins are flipped. How many possible outcomes are there?
- A. 2 C. 4
- B. 3 D. 8
- 7) A back-to-back stem-and-leaf plot compares two data sets with a shared stem of 6. Class A (left) shows leaf 9. What value does this leaf represent?
- A. 96 C. 69
- B. 59 D. Cannot be determined



1) What is the reflection of the point $(2, 6)$ across the x -axis?

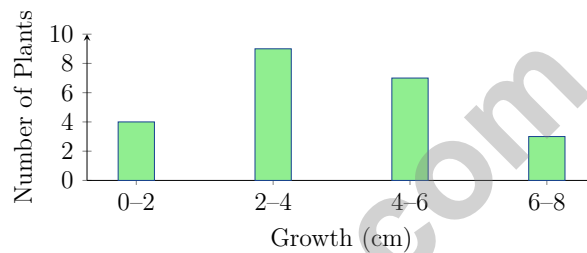
A. $(-2, 6)$

C. $(-2, -6)$

B. $(2, -6)$

D. $(6, 2)$

2) A histogram shows the distribution of plant growth over one month. The bar heights are: 0–2 cm: 4; 2–4 cm: 9; 4–6 cm: 7; 6–8 cm: 3. What is the total number of plants measured?



A. 17 plants

C. 23 plants

B. 19 plants

D. 30 plants

3) Compare two box plots. Both have the same IQR of 16. Plot X has min = 5, max = 45. Plot Y has min = 15, max = 35. What can you say about the two datasets?

A. They have the same range and spread.

C. Plot Y's data is less variably distributed.

B. Plot X has a larger range and greater overall spread.

D. The median is the same in both plots.



4) A dot plot shows the number of books read by 10 students: 2, 3, 3, 4, 4, 4, 5, 5, 6, 6. What is the median number of books?

A. 4

C. 5

B. 6

D. 4.5

5) A probability line goes from 0 to 1. Where would you place an event with probability $\frac{1}{4}$?

A. At 0 (impossible).

C. At $\frac{1}{2}$ (even chance).

B. Between 0 and $\frac{1}{2}$ (unlikely).

D. Between $\frac{1}{2}$ and 1 (likely).

6) A stem-and-leaf plot for test scores has the shape:

Stem	Leaf
8	
9	0, 1, 2, 3, 4, 5, 6, 7, 8, 9

What can you infer from this plot?

A. Most scores are in the 90s

C. There are no scores in the 80s

B. The mode is 95

D. The range is 10

7) A survey of 360 people asked about favorite pizza toppings. One section of the circle graph represents $\frac{1}{5}$ of the total. What central angle does this represent?

A. 36°

C. 90°

B. 60°

D. 72°



Scan me!
For more practice
& answers

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.



Scan me!
For more practice
& answers

North Dakota Practice Test Answers and Explanations

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

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(6.AR.RP.2)** If they mistakenly used $A = \pi d^2$ with $d = 2r = 6$ in, they would get $A \approx 3.14 \times 6^2 = 3.14 \times 36 = 113.04 \text{ in}^2$ (incorrect).
- 2) **Choice A is correct.** **(6.AR.RP.4)** Compare the unit prices. The 5-pack costs $12.50 \div 5 = \$2.50$ per pack, while the 8-pack costs $19.20 \div 8 = \$2.40$ per pack. The lower unit price is the better deal.
- 3) **Choice C is correct.** **(6.AR.RP.3)** For $c = 12j$, the line passes through $(0, 0)$, $(5, 60)$, $(10, 120)$, and $(15, 180)$. The constant rate is \$12 per jersey, so this represents a proportional relationship.
- 4) **Choice D is correct.** **(6.DPS.D.2)** Year 2 savings: $\$500 + 20\% \text{ of } \$500 = \$500 + \$100 = \$600$.
- 5) **Choice C is correct.** **(6.NO.O.3)** The scale bar represents $2 \text{ cm} = 40 \text{ km}$. So $8 \text{ cm} = 4 \times 40 = 160 \text{ km}$.
- 6) **Choice C is correct.** **(6.AR.RP.1)** First find the total amount of flour and sugar: $2 + 3 = 5$ cups. Flour is 2 of those 5 cups, so the ratio is $\frac{2}{5}$.
- 7) **The correct answer is 8.** **(6.DPS.D.1)** $Q_1 = 5$ and $Q_3 = 13$, so $\text{IQR} = 13 - 5 = 8$.
- 8) **Choice D is correct.** **(6.AR.RP.4)** Count the shapes carefully: there are 4 squares and 3 circles. The ratio of squares to circles is $4 : 3$.
- 9) **Choice D is correct.** **(6.AR.RP.2)** Divide miles by gallons: $48 \div 2 = 24$ miles per gallon.
- 10) **Choice C is correct.** **(6.AR.RP.3)** The rate is $5 : 2$ or 2.5 clients per week. In 6 weeks: $2.5 \times 6 = 15$ clients.
- 11) **Choice B is correct.** **(6.AR.RP.3)** The slope is $\frac{\text{rise}}{\text{run}} = \frac{32-0}{8-0} = \frac{32}{8} = 4$. This represents \$4 per ticket.
- 12) **The correct answer is 3.** **(6.NO.O.3)** Number of green marbles = $\frac{1}{3} \times 9 = 3$.
- 13) **Choice C is correct.** **(6.AR.RP.4)** $\frac{9}{10} = \frac{90}{100} = 90\%$.
- 14) **Choice D is correct.** **(6.AR.RP.4)** Decrease is $\$250 - \$200 = \$50$. Percent decrease is $\frac{50}{250} = 0.20 = 20\%$.
- 15) **Choice B is correct.** **(6.AR.RP.3)** Unit price: $3.75 \div 15 = 0.25$ dollars per ounce.
- 16) **Choice C is correct.** **(6.AR.RP.5)** Multiply: $1.2 \times 1000 = 1200$ grams.
- 17) **Choice D is correct.** **(6.DPS.D.4)** If Food : Rent = $2 : 5$ and Food = \$300, then $\frac{\$300}{\text{Rent}} = \frac{2}{5} \Rightarrow \text{Rent} = \frac{\$300 \times 5}{2} = \$750$.
- 18) **The correct answer is The box shows the middle 50% (from Q_1 to Q_3), and the whiskers extend to min and max.** **(6.AR.RP.1)** B is correct: the box spans from Q_1 to Q_3 , the middle 50% of the data. E is correct: the whiskers extend out to the minimum and maximum. A is wrong because the median splits the data by count, not necessarily at the numerical center. C is wrong because IQR is $Q_3 - Q_1$, not $\text{max} - \text{min}$. D is wrong because Q_1 is at most equal to the median, not strictly below it (they can be equal when many values cluster at the lower end).
- 19) **Choice C is correct.** **(6.NO.O.3)** Rewrite the division as multiplication by flipping $\frac{1}{3} : \frac{5}{6} \times \frac{3}{1} = \frac{15}{6}$. Simplify $\frac{15}{6}$ to $\frac{5}{2}$ (or mixed form $2\frac{1}{2}$).
- 20) **Choice A is correct.** **(6.NO.O.1)** $9,108 \div 52 = 175$ remainder 8. Check: $52 \times 175 = 9,100$, and $9,100 + 8 = 9,108$. So the whole-number quotient is 175.
- 21) **The correct answer is 22.** **(6.DPS.D.1)** Range = $\text{Max} - \text{Min} = 44 - 22 = 22$.
- 22) **Choice A is correct.** **(6.NO.O.2)** Subtract: $\$34.50 - \$7.25 = \$27.25$.
- 23) **Choice D is correct.** **(6.NO.O.4)** This is a GCF problem. The GCF of 35 and 49 is 7. So they can make 7 rows with 5 tomato and 7 pepper plants per row.
- 24) **Choice B is correct.** **(6.NO.O.4)** GCF of 35 and 49 is 7. So $35 + 49 = 7(5 + 7)$. Only Choice B uses the GCF and whole numbers.



Scan me!
For more practice
& answers

Hi, Math Detective!

◇ You did such a great job! You finished 5 tests like a real detective. You found the clues, used your tools, and solved the math. ◇

★ **Detectives know:** good work takes time. You took your time. You looked carefully. You found the answers! ★

Your Detective Skills

- **Sharp Eyes:** You notice the small details.
- **Smart Plans:** You pick the right way to solve.
- **Brave Heart:** You try even when it's tricky.
- **Steady Work:** You finish what you start.

Detective tip: on test day, look carefully at each problem. Underline important words. Then solve like the detective you are!

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

Jay Daie

Your Math Detective Helper

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.



VISIT [TESTINAR.COM/MATH6](https://www.testinar.com/math6)

FOR MORE PRACTICE TESTS AND LEARNING RESOURCES



PRACTICE
REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PREPARE TODAY. **SUCCEED TOMORROW!**