

3

North Dakota

NDSA

GRADE 3

MATH

PRACTICE TESTS



**Standards-Aligned
Practice for Stronger
Math Skills and
Test Readiness**



**Build Confidence
with Targeted Practice**



**Strengthen Skills
in Key Math Concepts**



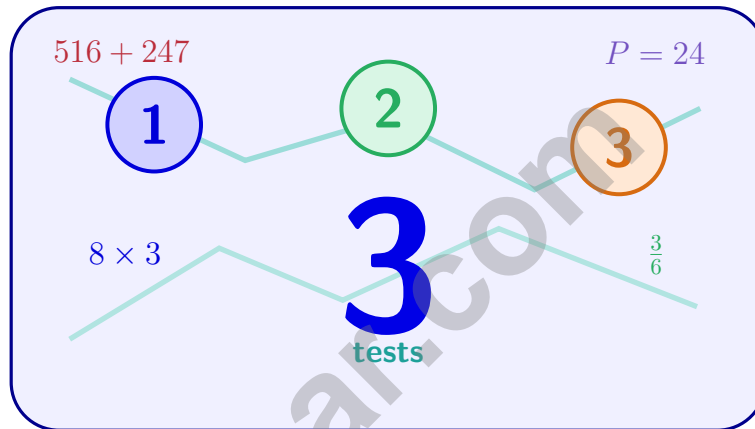
**Improve Test Readiness
with Realistic Practice**

*Be Ready.
Do Your Best!*



3 North Dakota NDSA Grade 3 Math Practice Tests

Standards-Aligned Practice for Stronger Math Skills and Test Readiness



Three 30-question trail tests packed with Grade 3 review, North Dakota NDSA strategy tips, answer keys, and step-by-step explanations that turn every miss into the next move.

Jay Daie and Reza Nazari



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Welcome to the North Dakota Math Trail

Three tests, one trail, and a stronger Grade 3 thinker at the end



To the Grade 3 Trail Scout

This book is your practice trail for the North Dakota NDSA. You will multiply and divide, read graphs, work with fractions, measure time, find area, and explain your thinking – one trail marker at a time.

Some problems will feel quick, like a clear stretch of wide open trail. Some will ask you to slow down, draw, count, or try again. That slow part is where strong math grows. Every page gives your brain another chance to spot, choose, and build.

Spot

Read carefully and find what the problem is really asking.

Sketch

Use numbers, arrays, number lines, or labels to make your thinking visible.

Signal

Check that your answer makes sense before you wave the next question on.

Trail promise: I will read like a tracker, sketch like a planner, and check like a careful scout. I do not have to be perfect to keep moving forward.

How to Use This Book

A four-step trail plan that turns practice into progress

Step 1: Pack Your Pack

Read the Quick Review first.
Wake up the Grade 3 ideas you will need before you set foot on the trail.

Step 2: Hit the Trail

Take one full test.
Thirty questions. Pencil sharp, work shown, calm pace – one marker at a time.

Step 3: Campfire Check

Check answers honestly.
Circle missed questions. Star any problem that felt confusing – those are tomorrow’s clues.

Step 4: Track Back

Fix a few mistakes.
Read the explanation, rework the problem, and carry that lesson up the next stretch of trail.

A Three-Week Trail Plan

Week 1	Hike Test 1. Map what feels strong and what needs a second look.
Week 2	Hike Test 2. Sharpen the habits: read slow, sketch the model, label every number.
Week 3	Hike Test 3. Bring everything – facts, models, checks, and calm focus.

Best trail habit: Do not only ask, “What did I score?” Ask, “What did I learn how to do better?”



Test Overview

What waits on the trail and what each practice test builds

Each practice test has 30 questions. Together they walk you through the kind of math thinking the North Dakota NDSA asks Grade 3 students to use: read carefully, choose a strategy, show work, and check whether an answer makes sense.

Selected-Response Questions

Pick the best answer from the choices. Strong scouts estimate first, cross out answers that cannot be right, and reread the question before circling.

Open-Ended Questions

Write the answer and show the thinking. A clear response uses neat numbers, helpful labels, and a short model or explanation.

Grade 3 Ideas You Will Meet on the Trail

- multiplication, division, arrays, equal groups, and fact fluency
- rounding, adding, subtracting, and multiplying by multiples of 10
- fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shapes
- two-step word problems and explaining a solution path

What strong NDSA work looks like: the scout reads the whole problem, picks a sensible strategy, writes numbers neatly, labels the answer, and checks that the answer truly fits the question.

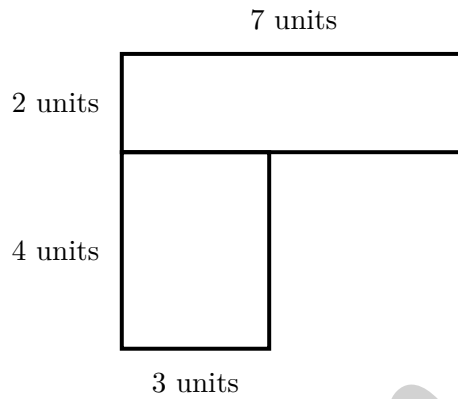


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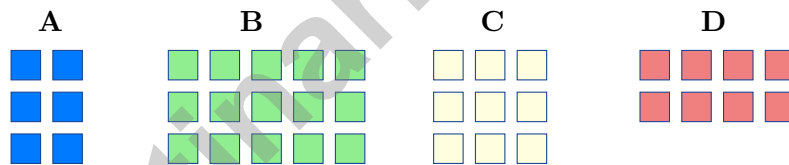
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- 4) An L-shaped kitchen floor plan shows two rectangular sections. Upper: 7 units by 2 units. Lower left: 3 units by 4 units. What is the total floor area?



- A. 26 sq units C. 12 sq units
 B. 14 sq units D. 56 sq units

- 5) Ava has 5 bags with 3 pencils in each. Which array shows 5×3 pencils?

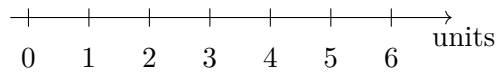


- 6) Ava wants to build a square using unit squares (each 1 inch by 1 inch). If her square is 5 inches on each side, how many unit squares does she need?



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7)



On a number line, the distance from 0 to 4 is divided into fourths. Which mark shows $\frac{3}{4}$ of the distance from 0 to 4?

 A. 3.5 C. 4 B. 2 D. 3

8) Write a fraction equivalent to $\frac{3}{4}$ by multiplying the numerator and denominator by 2.

9) Aiden calculated $2 \times 70 = 1400$. What is the CORRECT answer and what error did Aiden make?

 A. The correct answer is 140; Aiden added two zeros instead of one. C. The correct answer is 9; Aiden subtracted instead of multiplying. B. The correct answer is 140; Aiden multiplied wrong. D. The correct answer is 27; Aiden forgot the zero.

1) Lily cuts an orange into 8 equal slices. What fraction is one slice?

- A. $\frac{1}{8}$
 B. $\frac{7}{8}$

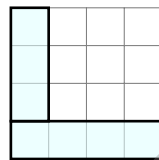
- C. $\frac{8}{8}$
 D. $\frac{1}{7}$

2) What is 145 rounded to the nearest 100?

- A. 100
 B. 140

- C. 150
 D. 200

3) This grid shows an L-shaped figure made of unit squares. Count all the unit squares to find the area.



How many unit squares cover this L-shape?

- A. 4 sq units
 B. 7 sq units

- C. 8 sq units
 D. 12 sq units

4) A rectangle is 6 units long and 8 units wide. Which shows its area broken into two smaller rectangles?

A. $6 \times 8 = 6 \times (3 + 5) = (6 \times 3) + (6 \times 5)$ C. $6 + 8 = 14$

B. $6 \times 8 = 48$

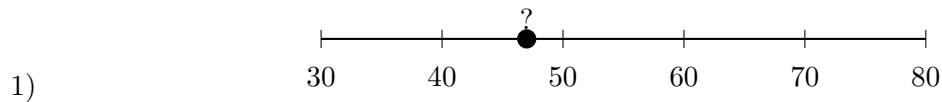
D. $6 + 8 + 6 + 8 = 28$

5) A bar graph shows hours practiced. Piano: 6 units (scale: 2 hours per unit). Guitar: 4 units (scale: 2 hours per unit). How many more hours was piano practiced?

- A. 2
 B. 4

- C. 8
 D. 12





Look at the number line. The number shown is between 40 and 50. To which number should it round?

- A. 40 C. 50
 B. 45 D. 60

2) What is 9×9 ?

3) Ava sorts apples into 5 equal groups. There are apples in each group. There are 40 apples in total.

$$5 \times \square = 40$$

- A. 7 C. 9
 B. 6 D. 8

4) The perimeter of a rectangle is 44 cm. If the width is 7 cm, what is the length?

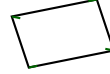


5)

Square



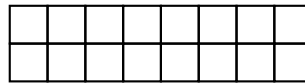
Rhombus



Which property do all squares and all rhombuses share?

- A. All have 4 right angles C. All have no parallel sides
 B. All have 4 equal sides D. All have 5 sides

6) Mia covers a 2 by 8 rectangle with unit square tiles. Here is the grid:



Count the unit squares. How many are there?

- A. 10 unit squares (the perimeter) C. 8 unit squares
 B. 16 unit squares D. 20 unit squares

7) Which repeated addition equals $9 + 9 + 9 + 9$?

- A. $3 \times 9 = 27$ C. $5 \times 9 = 45$
 B. $9 \times 9 = 81$ D. $4 \times 9 = 36$

8) Noah colors $\frac{2}{6}$ of a page. His friend colors $\frac{1}{3}$ of an identical page. Do they color the same amount?

- A. The pages might be different. C. Yes, same amount.
 B. No, his friend colors more. D. No, Noah colors more.

9) Ava divides a number line from 0 to 1 into 3 equal parts. She names the tick marks $\frac{1}{3}$ and $\frac{2}{3}$. If she adds one more tick mark at $\frac{3}{3}$, where is it?

- A. Before $\frac{1}{3}$ C. Between $\frac{1}{3}$ and $\frac{2}{3}$
 B. Beyond 1 D. At the right end (at 1)



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Practice Test Answer Keys

How to use this section with a Grade 3 student:

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

A calm correction routine builds stronger math habits.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- Choice D is correct.** **(3.GM.G.2)** A quadrilateral has 4 vertices (corners), one at each place where two sides meet.
- Choice B is correct.** **(3.NO.NF.2)** $\frac{4}{8}$ and $\frac{2}{4}$ mark the exact same point: the middle of the line. They name the same location.
- Choice D is correct.** **(3.NO.NF.1)** You subtract 3 four times: $12 - 3 - 3 - 3 - 3 = 0$. So $12 \div 3 = 4$.
- Choice A is correct.** **(3.GM.M.7)** Upper: $7 \times 2 = 14$ sq units. Lower: $3 \times 4 = 12$ sq units. Total: $14 + 12 = 26$ sq units.
- Choice B is correct.** **(3.AR.OA.2)** 5 bags with 3 pencils in each is shown by an array with 5 columns and 3 rows: $5 \times 3 = 15$ pencils.
- The correct answer is 25 unit squares.** **(3.GM.M.8)** A square with side length 5 inches has area $5 \times 5 = 25$ square inches, which equals 25 unit squares.
- Choice D is correct.** **(3.NO.NF.2)** $\frac{3}{4}$ of the distance from 0 to 4 means $\frac{3}{4} \times 4 = 3$. This lands at the 3 mark.
- The correct answer is $\frac{6}{8}$.** **(3.NO.NF.4)** Multiply the numerator and denominator by 2: $\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$.
- Choice A is correct.** **(3.NO.NBT.4)** $2 \times 70 = 2 \times 7 \times 10 = 14 \times 10 = 140$. You only add ONE zero when multiplying by a multiple of 10. Aiden added two zeros by mistake, getting 1400 instead.
- Choice B is correct.** **(3.NO.NF.1)** $\frac{2}{3}$ of a square divided into 3 parts means coloring 2 parts.
- Choice C is correct.** **(3.GM.M.8)** Wide rectangle: $8 \times 3 = 24$ square units.
- Choice C is correct.** **(3.AR.OA.2)** $3 \times 8 = 24$ and $4 \times 6 = 24$. Choice A: 20 and 21. Choice B: 25 and 24. Choice D: 18 and 16.
- Choice D is correct.** **(3.AR.OA.2)** Multiply: $8 \times 4 = 32$ chairs.
- Choice B is correct.** **(3.NO.NF.1)** Larger denominators give smaller fractions. $\frac{1}{8} < \frac{1}{4} < \frac{1}{2}$.
- Choice D is correct.** **(3.GM.M.8)** Area = length \times width = $8 \times 3 = 24$ square feet.
- Choices A and C are correct.** **(3.AR.OA.1)** A: $48 \div 6 = 8$ and $8 \times 6 = 48$ match. B: $35 \div 7 = 5$, not 4. C: $56 \div 8 = 7$ and $7 \times 8 = 56$ match. D: $30 \div 5 = 6$ but $6 \times 5 = 30$, not 25. E: $45 \div 9 = 5$ but $5 \times 9 = 45$, not 40.
- Choice B is correct.** **(3.NO.NF.5)** Two thirds (with thirds) covers more area than two fourths (with fourths). Larger pieces means larger total.
- Choice A is correct.** **(3.AR.OA.3)** First add: $15 + 9 = 24$ cars. Then divide by 3 children: $24 \div 3 = 8$ cars per child. Choice A correctly shows both steps with parentheses.
- Choice C is correct.** **(3.DPS.D.2)** At $3\frac{1}{2}$ inches, there are 4 X's.
- Choice A is correct.** **(3.GM.M.7)** Shape X has an area of 15 square units, which is larger than Shape Y's 9 square units. More space inside means greater area.
- Choice D is correct.** **(3.AR.OA.5)** Multiply: 7 groups \times 6 students per group = 42 students.
- Choice B is correct.** **(3.NO.NF.5)** Both bars show the same amount. $\frac{2}{3}$ and $\frac{4}{6}$ are equivalent.
- Choice B is correct.** **(3.NO.NF.3)** $\frac{3}{6} = \frac{1}{2}$ because both represent one-half.
- Choice C is correct.** **(3.GM.M.8)** Count bottom part: $6 \times 2 = 12$ squares. Count top-right part: $4 \times 2 = 8$ squares. Total: $12 + 8 = 20$ unit squares.
- Choice A is correct.** **(3.GM.M.3)** The minute hand on 2 means 10 minutes. The hour hand on 7 means 7 o'clock. So the time is 7 : 10.
- The correct answer is 72 square units.** **(3.GM.M.8)** $2 + 6 = 8$, and $9 \times 8 = 72$ square units.
- Choice B is correct.** **(3.NO.NF.4)** 12 sixths divided into groups of 6 sixths (one whole) gives 2 wholes. $12 \div 6 = 2$.
- Choice D is correct.** **(3.GM.M.7)** $2 \times 5 = 10$ square units.
- Choice D is correct.** **(3.AR.OA.6)** Odd \times odd is always odd. Examples: $1 \times 1 = 1$, $3 \times 5 = 15$, $7 \times 9 = 63$.
- Choice A is correct.** **(3.AR.OA.5)** From the fact-family triangle with factors 4 and 9 and product 36, we write two divisions: $36 \div 4 = 9$ and $36 \div 9 = 4$. The factors become quotients.



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Notes From Your Math Builder

Hi, Math Builder!

◇ Through 3 practice tests, you built your math house brick by brick. The walls are strong. The roof is on. You are ready for anything test day brings. ◇

★ **Builders know:** good plans make strong houses. You learned to plan, then build. That helps with any problem. ★

Builder's Tools

- **Foundation:** ROCK SOLID. Math facts are in place.
- **Frame:** STRONG. You can break problems into parts.
- **Walls:** TIDY. Your work is neat and clear.
- **Roof:** DONE. You always answer the question.

Builder tip: on test day, build each answer like a tiny house. Read first. Plan next. Do the math. Then check!

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

Jay Daie

Your Math Builder

3 GRADE 3 MATH PRACTICE TESTS

Practice Today. Succeed Tomorrow!



Give your child the tools to build strong math skills and test confidence!

This book includes 3 full-length Grade 3 Math practice tests that mirror real test formats and cover all key math standards. With a wide range of question types and real-world problems, students will gain the practice and confidence they need to do their best!

What's Inside?



Standards-Aligned Practice

Questions designed to cover essential Grade 3 math standards.



Variety of Question Types

Multiple-choice, short answer, and more to build well-rounded skills.



Real-World Applications

Engaging problems that connect math to everyday life.



Step-by-Step Progress

Track improvement and build confidence with every test.



Build Skills & Boost Confidence

Strengthen understanding and feel prepared for test day.

COVERS ALL ESSENTIAL TOPICS

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- ✓ Fractions & Decimals
- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ Graphing & Data Analysis
- ✓ And More!



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