

9

Nebraska

NSCAS Growth

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program



9

**PRINTED
TESTS**

+



2

**ONLINE
TESTS**



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



BUILT FOR ACAP
Standards-Aligned



**STRENGTHEN
SKILLS**



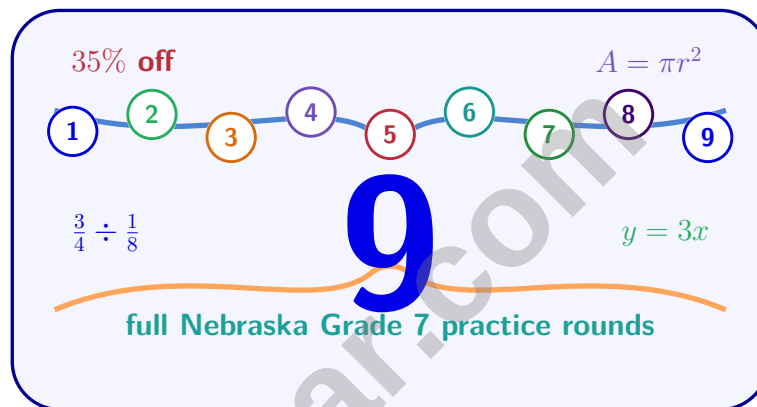
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Nebraska NSCAS Growth Grade 7 Math Practice Tests

Standards-Aligned Nebraska Practice for Proportional Reasoning, Expressions, Geometry, Statistics, and Probability



Nine complete 40-question Grade 7 NSCAS Growth practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Nebraska Grade 7 Problem Solver!

Nine focused rounds for sharper NSCAS Growth math thinking

This book gives you nine full Grade 7 NSCAS Growth 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 Nebraska 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

A nine-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.

Nebraska 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?

Nine NSCAS Growth tests, 360 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 7–9	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.

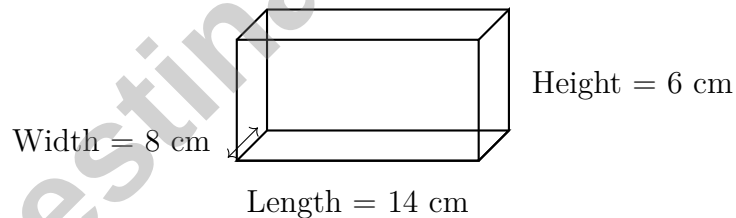


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& answers

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- 1) A student found the area of a circle with radius 5 cm and got 31.4 cm^2 . What error did the student make? Use $\pi \approx 3.14$.
- ☐ A. Used the diameter instead of radius ☐ C. Used πd instead of πr^2
☐ B. Used circumference formula $2\pi r$ instead of area ☐ D. Computed 3.14×5 instead of 3.14×5^2
- 2) A waiter receives a \$12 tip on a \$60 bill. What percentage tip did the customer leave?
- ☐ A. 15% ☐ C. 20%
☐ B. 18% ☐ D. 25%
- 3) A dart was thrown at a target 400 times. It hit the bullseye 92 times. What is the experimental probability of hitting the bullseye?
- ☐ A. 0.20 ☐ C. 0.25
☐ B. 0.23 ☐ D. 0.30

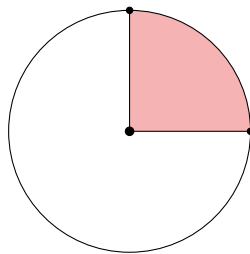


- 4) A rectangular prism has the dimensions shown. What is its volume?
- ☐ A. 28 cm^3 ☐ C. 504 cm^3
☐ B. 224 cm^3 ☐ D. 672 cm^3



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- 5) In the diagram, approximately what fraction of the circle is shaded?



- ☐ A. $\frac{1}{2}$ ☐ C. $\frac{1}{4}$
☐ B. $\frac{1}{3}$ ☐ D. $\frac{1}{8}$
- 6) Two fair number cubes are rolled. What is the probability of rolling a sum of 10 or higher? Express your answer as a simplified fraction.

- 7) A student says the probability of an event is $\frac{2}{3}$ and the probability of its complement is $\frac{1}{3}$. Is this correct?

- ☐ A. Yes, because $\frac{2}{3} + \frac{1}{3} = 1$ ☐ D. Cannot tell without more information
☐ B. No, the complement should be $\frac{1}{2}$
☐ C. No, the complement should be $\frac{3}{3}$

- 8) A bond pays \$360 in simple interest on a principal of \$2000 over 3 years. What is the annual interest rate?

- ☐ A. 4% ☐ C. 6%
☐ B. 5% ☐ D. 7.2%



9) A map uses a scale of 1 centimeter : 50 kilometers. If two cities are 3.5 cm apart on the map, what is the actual distance between them?

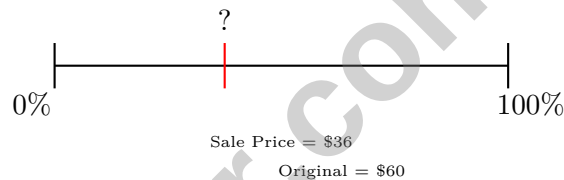
☐ A. 53.5 km

☐ C. 175 km

☐ B. 140 km

☐ D. 200 km

10) If $\frac{7}{x} = \frac{35}{100}$, what is x ?



11)

A discount bar shows original price \$60 and sale price \$36. What percent discount was applied?

☐ A. 30%

☐ C. 36%

☐ B. 24%

☐ D. 40%

12) What is $-11 + 14$?

☐ A. 25

☐ C. -3

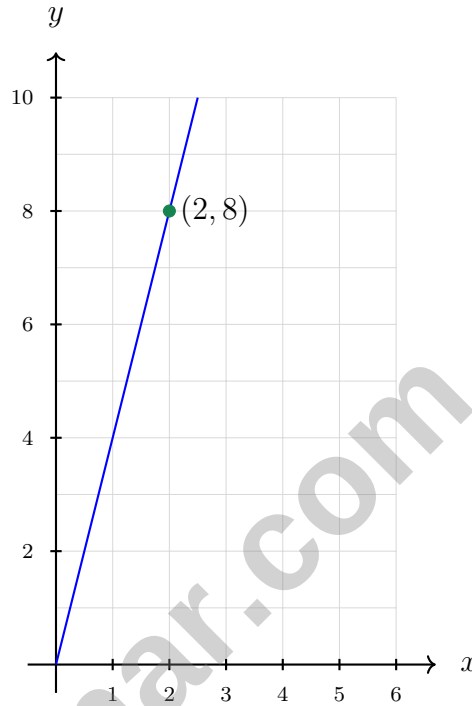
☐ B. -25

☐ D. 3



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- 1) The graph represents a proportional relationship, $y = kx$. One point on the graph is $(2, 8)$. What is the constant of proportionality, k ?

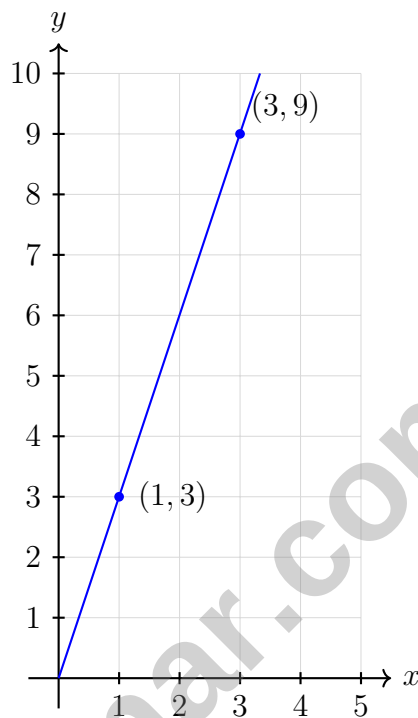


- ☐ A. 2
- ☐ B. 8
- ☐ C. 6
- ☐ D. 4
- 2) A watering system dispenses $\frac{3}{4}$ gallon per garden plot in $\frac{1}{2}$ minute. How many gallons per minute?
- ☐ A. 2 gal/min
- ☐ B. $\frac{3}{8}$ gal/min
- ☐ C. $\frac{8}{3}$ gal/min
- ☐ D. $\frac{3}{2}$ gal/min



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- 3) A coordinate plane shows a line passing through $(1, 3)$ and $(3, 9)$. Does this line represent a proportional relationship?



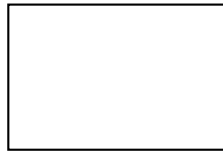
- ☐ A. Cannot tell without more points ☐ C. Yes; constant slope is 3
- ☐ B. No; points are not at origin ☐ D. Yes; line passes through origin
- 4) A rectangle has length $3(x + 2)$ and width 4. What expression represents the area?
- ☐ A. $12x + 24$ ☐ C. $3x + 2$
- ☐ B. $12x + 8$ ☐ D. $12x + 6$



- 1) A round table has radius 1.5 feet. Approximately, what is the distance around it?
Use $\pi \approx 3.14$.

- ☐ A. 4.71 ft ☐ C. 14.13 ft
☐ B. 9.42 ft ☐ D. 7.07 ft

Scale: 1 cm : 2.5 m



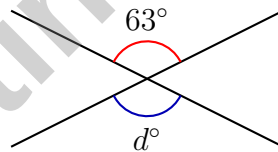
3.6 cm $\times$ 2.4 cm

2)

A scale drawing of a loading dock is 3.6 cm by 2.4 cm with a scale of 1 cm : 2.5 m. What is the area of the actual loading dock in square meters?

- ☐ A. 8.64 m² ☐ C. 54 m²
☐ B. 21.6 m² ☐ D. 81 m²

3)



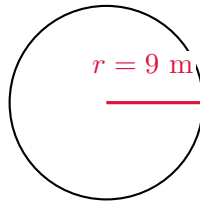
Two lines intersect. One angle measures 63°. What is the measure of the vertically opposite angle d ?

- ☐ A. 27° ☐ C. 117°
☐ B. 63° ☐ D. 153°



- 4) A model of a building is made with a scale of $1 \text{ cm} = 2 \text{ m}$. If the model is 12 cm tall, how tall is the actual building?

- ☐ A. 6 m ☐ C. 24 m
☐ B. 12 m ☐ D. 36 m



5)

What is the area of this circle? Use $\pi \approx 3.14$.

- ☐ A. 56.52 m^2 ☐ C. 254.34 m^2
☐ B. 113.04 m^2 ☐ D. 508.68 m^2



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Nebraska NSCAS Growth 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 Nebraska NSCAS Growth practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.G.4-7.G.6) The correct area is $3.14 \times 5^2 = 78.5 \text{ cm}^2$. The student multiplied $3.14 \times 5 = 15.7$, then doubled to 31.4, missing the squaring step.
- 2) **Choice C is correct.** (7.RP.3) Tip percentage = $\frac{12}{60} = 0.20 = 20\%$.
- 3) **Choice B is correct.** (7.SP.6) Experimental probability = $\frac{92}{400} = 0.23$. Distractors represent nearby decimal values that students might compute incorrectly.
- 4) **Choice D is correct.** (7.G.4-7.G.6) $V = l \times w \times h = 14 \times 8 \times 6 = 672 \text{ cm}^3$.
- 5) **Choice C is correct.** (7.G.4-7.G.6) A 90° sector represents $\frac{90^\circ}{360^\circ} = \frac{1}{4}$ of the circle.
- 6) **The correct answer is $\frac{1}{6}$.** (7.SP.5-7.SP.8) Sums of 10 or higher: (4,6), (5,5), (5,6), (6,4), (6,5), (6,6) = 6 outcomes out of 36. $\frac{6}{36} = \frac{1}{6}$.
- 7) **Choice A is correct.** (7.SP.5-7.SP.8) An event and its complement sum to 1. Here, $\frac{2}{3} + \frac{1}{3} = \frac{3}{3} = 1$, so both probabilities are correct.
- 8) **Choice C is correct.** (7.RP.3) $360 = 2000 \times r \times 3 \Rightarrow 360 = 6000r \Rightarrow r = 0.06 = 6\%$.
- 9) **Choice C is correct.** (7.RP.1-7.RP.3) Multiply the map distance by the scale factor: $3.5 \times 50 = 175 \text{ km}$.
- 10) **The correct answer is 20.** (7.RP.1-7.RP.3) Cross multiply: $7 \times 100 = 35 \times x$. So $700 = 35x$, giving $x = 20$.
- 11) **Choice D is correct.** (7.RP.3) Discount amount = $60 - 36 = \$24$. Percent = $(24/60) \times 100 = 40\%$.
- 12) **Choice D is correct.** (7.NS.1b) Subtract absolute values: $|14| - |-11| = 14 - 11 = 3$. Since $14 > |-11|$ and 14 is positive, the answer is 3.
- 13) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\frac{3/8}{1/4} = \frac{3}{8} \times 4 = \frac{12}{8} = \frac{3}{2}$ streams per day.
- 14) **Choice D is correct.** (7.RP.1-7.RP.3) At constant rate with no warm-up: pages = $40 \times$ minutes. Proportional with $k = 40$.
- 15) **Choice D is correct.** (7.RP.1-7.RP.3) Rate is $\frac{3 \text{ miles}}{30 \text{ min}} = 0.1$ miles per minute.
- 16) **Choice A is correct.** (7.NS.1-7.NS.3) Collected: $150.50 + 225.75 = 376.25$. Left: $376.25 - 180.25 = 196.00$ dollars.
- 17) **Choice A is correct.** (7.NS.1-7.NS.3) $10^9 = 1$ billion. So $5.8 \times 10^9 = 5.8$ billion.
- 18) **Choice A is correct.** (7.EE.1-7.EE.2) Combine: $(-2i + 6i - i) + (10 - 8 - 1) = 3i + 1$.
- 19) **The correct answer is A,C.** (7.G.4-7.G.6) Large square: $20 \times 20 = 400 \text{ m}^2$ (A). Small square: $5 \times 5 = 25 \text{ m}^2$. Remaining: $400 - 25 = 375 \text{ m}^2$ (C). The cutout is $\frac{25}{400} = \frac{1}{16}$ of the original area, not $\frac{1}{20}$.
- 20) **Choice C is correct.** (7.G.1-7.G.5) The scale factor is the ratio of actual to drawing: $5 \text{ cm} \div 1 \text{ cm} = 5$. Each unit on the drawing represents 5 times that length in reality.
- 21) **Choice D is correct.** (7.RP.3) The correct proportion is part over whole equals percent over 100. Setting it up correctly: $\frac{24}{120} = \frac{p}{100}$ gives $p = 20\%$.
- 22) **Choice B is correct.** (7.NS.1-7.NS.3) $2 \times 2 = 4$, so $\sqrt{4} = 2$.
- 23) **Choice A is correct.** (7.EE.1-7.EE.2) Quotient rule: $\frac{n^9}{n^4} = n^{9-4} = n^5$.
- 24) **Choice A is correct.** (7.G.1-7.G.5) Blueprint 1 at scale 1:4 ft: actual hallway is $2.5 \times 4 = 10 \text{ ft}$ and $8 \times 4 = 32 \text{ ft}$. Blueprint 2 shows the same hallway ($10 \text{ ft} \times 32 \text{ ft}$) as $5 \times 16 \text{ in}$. Scale of B: $10 \text{ ft} \div 5 \text{ in} = 2 \text{ ft per inch}$, or 1 in : 2 ft. Ratio check: scale B (2 ft/in) is half scale A (4 ft/in), so drawing B should be $4 \div 2 = 2 \times$ larger: B is $5 \times 16 \text{ in}$ vs A is $2.5 \times 8 \text{ in}$. Correct!
- 25) **Choice C is correct.** (7.G.1-7.G.5) Scale factor = $\frac{7.5}{5} = 1.5$. Check: $4 \times 1.5 = 6 \checkmark$
- 26) **The correct answer is 1600.** (7.SP.1-7.SP.4) Set up the proportion: $\frac{80}{250} = \frac{x}{5000}$. Solve: $x = \frac{80 \times 5000}{250} = 1600$.
- 27) **Choice C is correct.** (7.SP.5-7.SP.8) $0.4 + 0.35 + 0.25 = 1.0$ and each probability is in $[0, 1]$, so this is valid.
- 28) **Choice C is correct.** (7.NS.2) $-\frac{1}{4} \times 8 = -\frac{8}{4} = -2$.
- 29) **Choice C is correct.** (7.SP.1-7.SP.4) Removing 28 and adding 82 (a larger value) changes the sum significantly, affecting the mean. Median and mode may not change if the dataset is large enough.



Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

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

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **9** 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:

9

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!



2 ONLINE TESTS

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



2 EXTRA ONLINE TEST ACCESS CODE IS INSIDE THE BOOK!

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