

8

Nebraska

NSCAS Growth

GRADE 7

MATH

PRACTICE TESTS



Standards Aligned
Problem Solving

For Comprehensive
Assessment Programs



8 PRINTED TESTS



2 ONLINE TESTS



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



BUILD CONFIDENCE



STRENGTHEN SKILLS



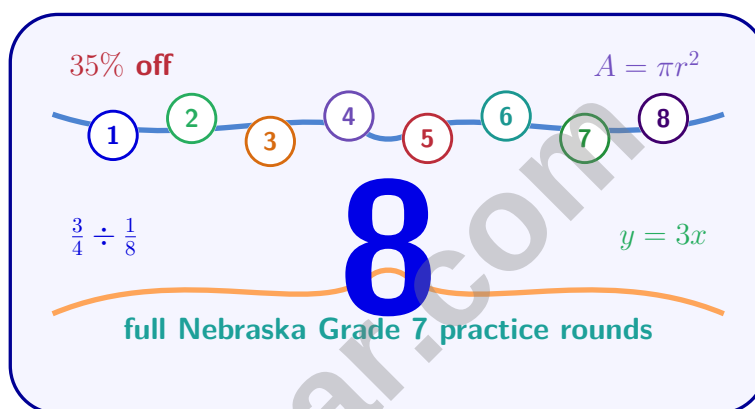
THINK SMARTER



BE TEST-READY

8 Nebraska NSCAS Growth Grade 7 Math Practice Tests

High-value preparation in Nebraska Grade 7 ratios, rational number operations, expressions, geometry, and experimental probability



Eight 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!

Eight focused rounds for sharper NSCAS Growth math thinking

This book gives you eight 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

An eight-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?

Eight NSCAS Growth tests, 320 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 7–8	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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For more practice
& answers

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1) Solve: $0.5x + 3.5 = 8.5$

☐ A. $x = 5$

☐ C. $x = 12$

☐ B. $x = 10$

☐ D. $x = 14$

2) Starting with \$600, an account earns 8% annual compound interest. How much interest is earned after 3 years?

3) Factor: $12p - 8$

☐ A. $4(3p - 2)$

☐ C. $8(4p - 1)$

☐ B. $2(6p - 4)$

☐ D. $6(2p - 1.33)$

4) An elevator descends 336 meters in 12 seconds. What is its descent rate?

☐ A. 28 m/s

☐ C. 348 m/s

☐ B. -28 m/s (descent)

☐ D. 336 m/s

5) Which fraction converts to a terminating decimal?

☐ A. $\frac{1}{3}$

☐ C. $\frac{1}{6}$

☐ B. $\frac{2}{5}$

☐ D. $\frac{1}{7}$



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6)

Time (hours)	Temperature change ($^{\circ}\text{F}$)
1	-1.5
2	-3.0
3	-4.5

Based on the pattern, what is the temperature change after 5 hours?

☐ A. -6.0°F ☐ C. 7.5°F ☐ B. -7.5°F ☐ D. -13.5°F

7) When 6.75 is multiplied by a power of 10 to become 0.000675, what is the exponent?

☐ A. 10^{-2} ☐ C. 10^{-4} ☐ B. 10^{-3} ☐ D. 10^{-5}

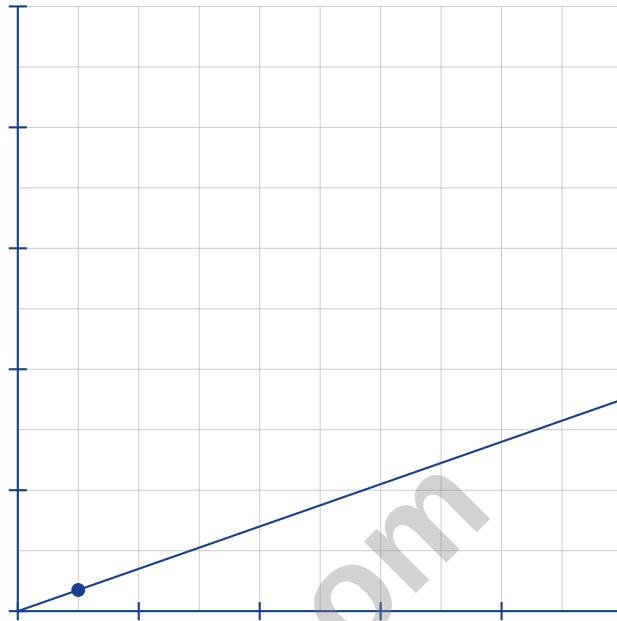
8) Which expression represents “twice the difference of y and 5”?

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

9) Simplify: $(3x + 5) + (2x - 7)$

☐ A. $5x - 2$ ☐ C. $5x - 12$ ☐ B. $5x + 2$ ☐ D. $6x - 2$ 

Kilograms



Tablets of soap

10)

A batch of soap tablets has a proportional mass. From the unit-rate point shown, how many kilograms do 8 tablets weigh?

☐ A. 0.35 kg

☐ C. 8.35 kg

☐ B. 28 kg

☐ D. 2.8 kg

Simplify the expression below:

$$\frac{(j^3)^2}{j^5}$$

Which law applies FIRST?

11)

☐ Power Rule

☐ Product Rule

Simplify $\frac{(j^3)^2}{j^5}$:

☐ A. j^1 or j
☐ C. j^{11}
☐ B. j^7
☐ D. j^{30}


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- 1) A supplier sells fabric to a boutique at \$35 per yard. The boutique marks it up by 40%. What is the selling price per yard?

☐ A. \$60☐ C. \$21☐ B. \$84☐ D. \$49

- 2) The distance from Earth to the Sun is approximately 1.5×10^8 kilometers. Express this in standard form.

☐ A. 15,000,000 km☐ C. 1,500,000,000 km☐ B. 150,000,000 km☐ D. 15,000,000,000 km

- 3) A circle has radius 7 cm. Find its circumference using $\pi \approx \frac{22}{7}$.

- 4) A perimeter of a square is $4(2b + 1)$. Which expression is equivalent?

☐ A. $8b + 4$ ☐ C. $6b + 5$ ☐ B. $8b + 1$ ☐ D. $2b + 5$

- 5) A cylindrical glass has a diameter of 6 cm and a height of 10 cm. What is the lateral surface area of the glass? Use $\pi \approx 3.14$.



6) A student simplifies $\frac{y^8}{y^3}$ and gets y^{11} . What rule did they use incorrectly?

- ☐ A. They used the product rule instead of the quotient rule.
- ☐ B. They multiplied exponents instead of subtracting them.
- ☐ C. They forgot to simplify the coefficient.
- ☐ D. They changed the base incorrectly.

7) Solve for x : $3(x - 7) = 18$

- ☐ A. $x = 7$
- ☐ B. $x = 9$
- ☐ C. $x = 11$
- ☐ D. $x = 13$

8) A dot plot shows the number of text messages sent by students in one day. Which statement is BEST supported by the mode of the data?

- ☐ A. The average student sends many messages
- ☐ B. The most common number of messages sent is the mode
- ☐ C. Half the students send more than the mode
- ☐ D. The mode shows how spread out the data is

9) A letter is drawn from the word MATH, and then a number is chosen from 1 to 5. How many outcomes are in the sample space?

Letters: M, A, T, H Numbers: 1, 2, 3, 4, 5

- ☐ A. 9
- ☐ B. 15
- ☐ C. 20
- ☐ D. 25



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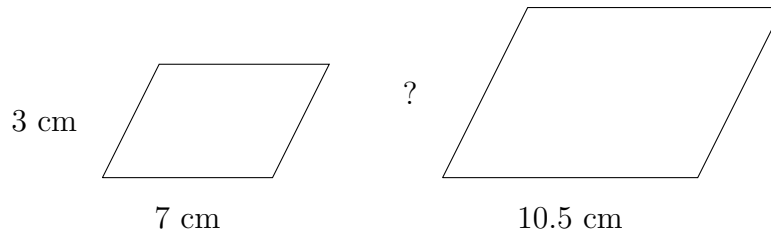
1) Solve for x : $-3(x + 4) = 24$

☐ A. $x = -12$

☐ C. $x = 4$

☐ B. $x = -8$

☐ D. $x = 8$



2)

The trapezoids are similar. Find the height of the larger trapezoid.

☐ A. 3 cm

☐ C. 4.5 cm

☐ B. 4 cm

☐ D. 6 cm

3) A probability model has outcomes $\{X, Y, Z\}$ with $P(X) = 0.45$, $P(Y) = 0.35$. Find $P(Z)$.

☐ A. 0.2

☐ C. 0.8

☐ B. 0.1

☐ D. 0.9

4) Two datasets are displayed in a back-to-back stem-and-leaf plot:

		Group A	Stem	Group B
Group A (left) vs. Group B (right)		8, 5, 2	5	3, 6, 9
		7, 4	6	1, 5, 8
			7	2, 4, 6

Which group has more data values?

☐ A. Group A

☐ C. Both equal

☐ B. Group B

☐ D. Cannot determine



5) Expand and simplify: $6(2k + 1) + 3(k - 2)$

☐ A. $15k$

☐ C. $15k + 3$

☐ B. $15k + 6$

☐ D. $12k - 6$

6) On a number line, which operation is shown by moving 8 units to the right from -3 ?

☐ A. $-3 - 8$

☐ C. $3 + 8$

☐ B. $3 - 8$

☐ D. $-3 - (-8)$

7) A bookstore has 400 books. If 22% of them are fiction, how many fiction books are there?

☐ A. 66

☐ C. 88

☐ B. 78

☐ D. 100

8) A rectangular patio has area $36m + 54$ square feet. If the width is 18 feet, what is the length?

☐ A. $2m + 3$

☐ C. $3m + 3$

☐ B. $2m + 54$

☐ D. $36m$

9) A retailer buys items for \$80 and marks them up by 55%. What is the selling price?



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& answers

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 B is correct.** (7.EE.3-7.EE.4) Subtract 3.5: $0.5x = 5$. Divide by 0.5 (or multiply by 2): $x = 10$.
- 2) **The correct answer is \$155.83.** (7.RP.3) Final balance: $600(1.08)^3 = 600 \times 1.2597 = 755.83$. Interest earned: $755.83 - 600 = 155.83$.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) The GCF of 12 and 8 is 4. Factor out 4: $12p - 8 = 4(3p - 2)$.
- 4) **Choice B is correct.** (7.NS.1-7.NS.3) Descent of 336 m is -336 . Rate: $(-336) \div 12 = -28$ m/s. Negative indicates downward motion.
- 5) **Choice B is correct.** (7.NS.2d) A fraction terminates if the denominator has only factors of 2 and/or 5. Dividing: $2 \div 5 = 0.4$. The others contain factors like 3 or 7.
- 6) **Choice B is correct.** (7.NS.1-7.NS.3) Change per hour is -1.5°F . After 5 hours: $-1.5 \times 5 = -7.5^\circ\text{F}$.
- 7) **Choice C is correct.** (7.NS.1-7.NS.3) $6.75 \times 10^{-4} = 6.75 \times 0.0001 = 0.000675$. The decimal moves 4 places left.
- 8) **Choice B is correct.** (7.EE.1-7.EE.2) Difference of y and 5 is $(y - 5)$. Twice this is $2(y - 5)$.
- 9) **Choice A is correct.** (7.EE.1-7.EE.2) Combine like terms: $(3x + 2x) + (5 - 7) = 5x - 2$.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate is $(1, 0.35)$, so $k = 0.35$ kg per tablet. For 8 tablets: $8 \times 0.35 = 2.8$ kg.
- 11) **Choice A is correct.** (7.EE.1-7.EE.2) Apply power rule first: $(j^3)^2 = j^6$. Then quotient rule: $\frac{j^6}{j^5} = j^{6-5} = j^1 = j$.
- 12) **Choice A is correct.** (7.EE.4a) Setup fee is \$19.99 plus \$12.99 per month, so $C = 19.99 + 12.99n$.
- 13) **Choice B is correct.** (7.EE.3-7.EE.4) Subtract 4: $\frac{2x}{3} = 6$. Multiply by $\frac{3}{2}$: $2x = 18 \Rightarrow x = 9$.
- 14) **Choice C is correct.** (7.EE.4a) Distribute both sides: $4(2x) + 4(1) = 3(x) + 3(8) \Rightarrow 8x + 4 = 3x + 24$. Subtract $3x$: $5x + 4 = 24$. Subtract 4: $5x = 20$. Divide by 5: $x = 4$. Verify: $4(2 \cdot 4 + 1) = 4(9) = 36$ and $3(4 + 8) = 3(12) = 36$. ✓
- 15) **Choice C is correct.** (7.SP.5-7.SP.8) Sum of known probabilities: $\frac{1}{6} + \frac{1}{3} + \frac{1}{4} = \frac{2}{12} + \frac{4}{12} + \frac{3}{12} = \frac{9}{12} = \frac{3}{4}$. Then $P(W) = 1 - \frac{3}{4} = \frac{1}{4}$.
- 16) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute: $5(3y) - 5(2) + 4y = 15y - 10 + 4y$. Combine y terms: $15y + 4y - 10 = 19y - 10$.
- 17) **Choice C is correct.** (7.RP.3) Usage fee = $0.05 \times 10000 = \$500$. Total = $300 + 500 = \$1,300$.
- 18) **Choice B is correct.** (7.G.4-7.G.6) Square: $8 \times 8 = 64$ cm². Triangle: $\frac{1}{2} \times 8 \times 8 = 32$ cm². Total: $64 + 32 = 96$ cm².
- 19) **The correct answer is B,D.** (7.NS.1-7.NS.3) B: $-33 + 33 = 0$ (opposites sum to zero). D: $-100 + 100 = 0$ (opposites sum to zero). A: $20 + (-10) = 10$ (not zero). C: $14 + (-7) = 7$ (not zero).
- 20) **The correct answer is 13.** (7.NS.1-7.NS.3) Since the area is 169, the side length is $\sqrt{169} = 13$ units.
- 21) **Choice D is correct.** (7.RP.1-7.RP.3) Proportion: $\frac{1}{0.62} = \frac{300}{x}$. So $x = 300 \times 0.62 = 186$ miles.
- 22) **The correct answer is $\frac{3}{4}$.** (7.NS.1-7.NS.3) Honey for scaled recipe = $\frac{2}{3} \times \frac{3}{2} = 1$ cup. Honey used for granola bars = $\frac{1}{4} \times 1 = \frac{1}{4}$ cup. Remaining: $1 - \frac{1}{4} = \frac{3}{4}$ cup.
- 23) **Choice B is correct.** (7.G.4-7.G.6) $h = \frac{V}{l \times w} = \frac{360}{10 \times 6} = \frac{360}{60} = 6$ inches.
- 24) **Choice B is correct.** (7.G.1-7.G.5) Given three specific side lengths, there is exactly one shape (up to congruence). This guarantees uniqueness; Triangle Inequality only confirms existence.
- 25) **Choice C is correct.** (7.G.4-7.G.6) A diameter is a chord that passes through the center. All diameters are chords.
- 26) **The correct answer is 14.** (7.EE.1-7.EE.2) The expression simplifies to $5a + 4$. With $a = 2$, the value is $10 + 4 = 14$.
- 27) **Choice B is correct.** (7.G.1-7.G.5) When all three side lengths are specified (7 cm, 6 cm, 8 cm), exactly one unique triangle (up to congruence) can be constructed. This is the SSS (Side-Side-Side) condition.
- 28) **Choice B is correct.** (7.SP.1-7.SP.4) $\frac{5}{50} = \frac{x}{10000}$. Reduce: $\frac{1}{10} = \frac{x}{10000} \Rightarrow x = 1000$.
- 29) **Choice D is correct.** (7.RP.1-7.RP.3) First: $\frac{150}{2/3} = 150 \times \frac{3}{2} = 225$ \$/hr. Second: $\frac{140}{3/5} = 140 \times \frac{5}{3} = \frac{700}{3} \approx 233.33$ \$/hr. First is less.
- 30) **Choice D is correct.** (7.RP.1-7.RP.3) Substitute into $y = -2x$: when $x = 1$, $y = -2(1) = -2$. Point $(1, -2)$ is on the line.



A Note for a Careful Thinker

Hi, Careful Thinker!

◇ This wide-ranging book gave you eight serious Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. This book gave you room to practice the kind of thinking seventh graders need: comparing quantities, analyzing patterns, and organizing information. ◇

★ **Remember this:** The goal was never just to finish pages. The goal was to become the kind of student who knows how to begin, how to adjust, and how to check. ★

Your Careful-Thinking Toolkit

- **Read Twice:** First for the story, second for the math.
- **Label Values:** Give each number a job.
- **Check Signs:** Negatives and inequalities deserve attention.
- **Use Evidence:** Let the work prove the answer.

Grade 7 test-day tip: On test day, underline the question before solving. It keeps your answer aimed at the right target.

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

Jay Daie

Your Math Practice Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** 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:

8 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!

Don't lose it—your extra practice and success start here!



VISIT **TESTINAR.COM/MATH7** FOR MORE PRACTICE TESTS



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REGULARLY



STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY