

7 Nebraska NSCAS Growth Grade 7 Math Practice Tests



7 PRINTED TESTS + 2 ONLINE TESTS

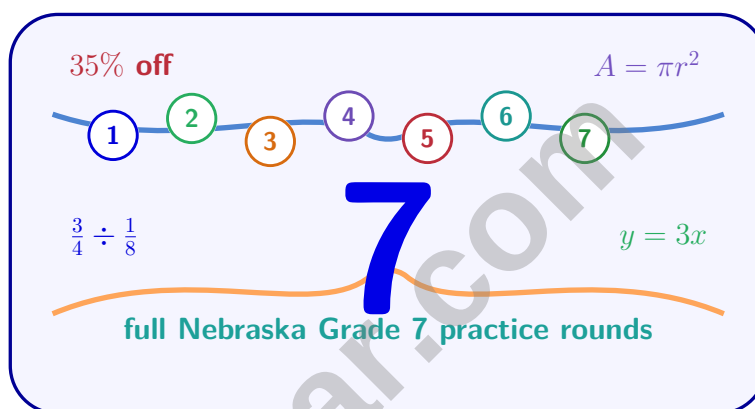


**Standards Aligned Problem Solving
For Comprehensive Assessment Programs**



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 seven 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, 280 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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& answers

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Savings \$400/month	Expenses \$1600/month
------------------------	--------------------------

1)

Based on the diagram, what percent of a \$2 000 monthly income goes to savings?

- ☐ A. 10% ☐ C. 20%
☐ B. 15% ☐ D. 25%

2) A simulation of drawing cards with replacement produces 60 trials. If outcome A appears 15 times and outcome B appears 45 times, what is the experimental error compared to the theoretical probability if outcome A has theoretical probability 0.20?

- ☐ A. 0.05 ☐ C. 0.15
☐ B. 0.10 ☐ D. 0.25

3) A construction contractor charges a \$500 deposit plus \$75 per hour of labor. A job takes 20 hours. What is the total cost?

- ☐ A. \$1, 200 ☐ C. \$1, 800
☐ B. \$1, 500 ☐ D. \$2, 000

4) A proportional relationship is shown by a line through the origin and (4, 6). What is the constant of proportionality?



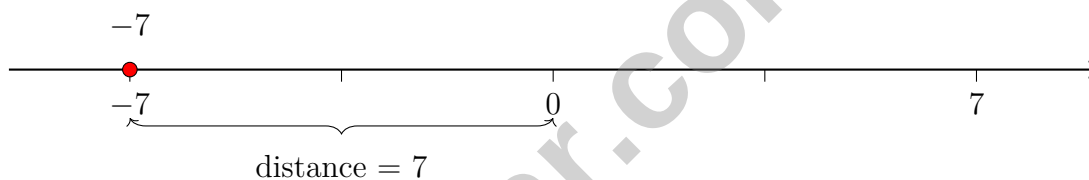
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- 5) A deposit of \$1,500 earns compound interest. The table shows balances at years 0, 1, 2, and 3. What is the annual interest rate?

Year	Balance
0	\$1,500
1	\$1,650
2	\$1,815
3	\$1,996.50

- ☐ A. 8% ☐ C. 15%
☐ B. 12% ☐ D. 10%

- 6) What is $|-7|$?



- ☐ A. -7 (confuses absolute value with the original number) ☐ C. 0 (misplaces absolute value at the origin)
☐ B. -14 (incorrectly applies a sign reversal) ☐ D. 7 (correct; distance is always non-negative)

- 7) Factor out the GCF from $30x - 18y + 6$:

- ☐ A. $6(5x - 3y + 1)$ ☐ C. $3(10x - 6y + 2)$
☐ B. $6(5x - 3y)$ ☐ D. $30(x - y + 0.2)$



8) A square pyramid has base side 9 m and slant height 12 m. What is the total surface area?

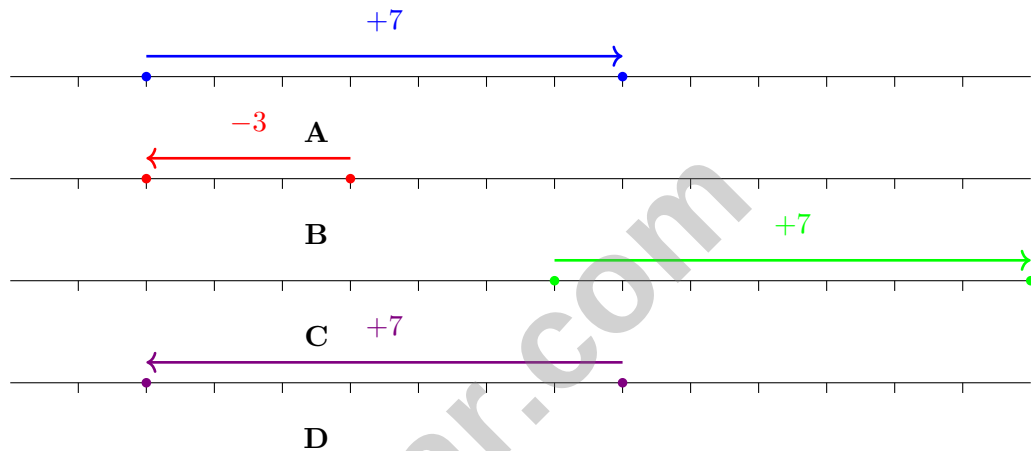
☐ A. 81 m^2

☐ C. 297 m^2

☐ B. 216 m^2

☐ D. 378 m^2

9) Which number line correctly shows $-3 + 7$?



10) Which expression is NOT in simplified form?

☐ A. $2a + 6a - b$

☐ C. $5p + 3q - 2r$

☐ B. $8x^2 + 4y$

☐ D. $12c - 3d + e$

11) A living room measures 18 feet by 14 feet. On a floor plan with scale $\frac{1}{2}$ inch to 4 feet, what is the area of the room on the floor plan in square inches?



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1) To find the unit price when $\frac{2}{5}$ pound costs \$4, which expression correctly computes the price per pound?

☐ A. $4 \times \frac{2}{5}$

☐ B. $\frac{2}{5} + 4$

☐ C. $\frac{2}{5} \div 4$

☐ D. $4 \div \frac{2}{5} = 4 \times \frac{5}{2}$

2) Which expression is equivalent to $2a + 2b + 2c$?

☐ A. $2(a + b + c)$

☐ B. $2(a + b) + c$

☐ C. $2abc$

☐ D. $(2 + a)(2 + b)(2 + c)$

3) A mosaic is a square ($14 \text{ cm} \times 14 \text{ cm}$) with four identical corner triangles removed (each $3 \text{ cm} \times 3 \text{ cm}$ right triangle). What is the remaining area?

☐ A. 160.5 cm^2

☐ B. 178 cm^2

☐ C. 196 cm^2

☐ D. 205.5 cm^2

4) A rectangular prism has dimensions 2 feet, 3 feet, and 4 feet. A second rectangular prism has dimensions 4 feet, 6 feet, and 8 feet. How many times larger is the volume of the second prism than the first?

☐ A. 2 times

☐ B. 4 times

☐ C. 8 times

☐ D. 16 times

5) Which is the best approximation for π ?

☐ A. $\frac{22}{7}$

☐ B. 3

☐ C. 2.5

☐ D. 4



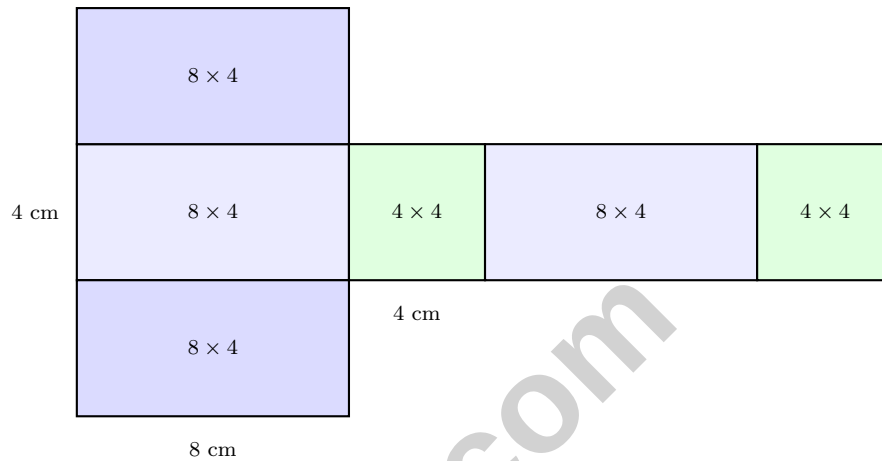
6) Factor: $7p + 28$

☐ A. $7(p + 4)$

☐ B. $7p(1 + 4)$

☐ C. $14(p + 2)$

☐ D. $28(p + 1)$



7)

The net folds into a rectangular prism with dimensions $8\text{ cm} \times 4\text{ cm} \times 4\text{ cm}$. What is its surface area?

☐ A. 128 cm^2

☐ B. 144 cm^2

☐ C. 160 cm^2

☐ D. 192 cm^2

8) Simplify: $7m^2 + 3n + 2m^2 - n + 4$

☐ A. $16m^2n + 4$

☐ B. $9m^2 + 2n + 4$

☐ C. $16m^2 + 2n$

☐ D. $5m^2 + 2n + 4$

9) Solve: $-2(x + 1) < 10$

☐ A. $x > -6$

☐ B. $x < -6$

☐ C. $x < 6$

☐ D. $x > 6$



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1) A savings account earns 6% simple interest. Which statement best explains the benefit of starting to save early?

- ☐ A. Early saving guarantees no losses on investments
- ☐ B. Interest rates are always higher for younger people
- ☐ C. Early savers never need to work again
- ☐ D. More time allows interest to accumulate on a larger balance

2) What is the greatest common factor of $20x$ and 30 ?

3) Simplify: $\frac{\frac{5}{8}}{\frac{3}{4}}$

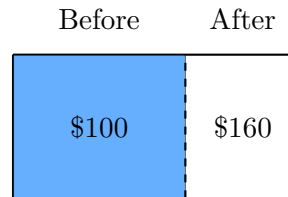
- ☐ A. $\frac{15}{32}$
- ☐ B. $\frac{6}{5}$
- ☐ C. $\frac{32}{15}$
- ☐ D. $\frac{5}{6}$

4) A student receives a paycheck stub showing an error. The gross pay is listed as \$1 200, taxes withheld are \$180, but the net pay shows \$1 100 instead of the correct amount. Which error occurred?

- ☐ A. Net pay is correct; no error exists
- ☐ B. Tax withholding should be \$100
- ☐ C. Gross pay should be \$1 280
- ☐ D. An additional \$20 deduction was not listed



5)

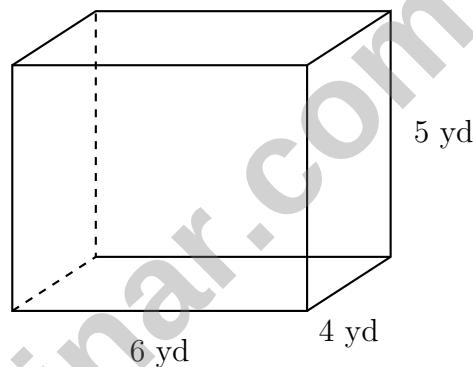


A before-and-after bar diagram shows a quantity increasing from \$100 to \$160. What is the percent increase?

☐ A. 40%

☐ C. 37.5%

☐ B. 62.5%

☐ D. 60%


6)

A rectangular prism has dimensions 6 yd $\times$ 5 yd $\times$ 4 yd. Find the surface area.

☐ A. 120 yd²
☐ C. 180 yd²
☐ B. 148 yd²
☐ D. 240 yd²
7) Solve: $\frac{x}{2} + 3 > 9$
☐ A. $x > 12$
☐ C. $x > 6$
☐ B. $x < 12$
☐ D. $x > 3$


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Nebraska Student-Centered Assessment System 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 Student-Centered Assessment System practice test.



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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.RP.3) Savings percent: $\frac{400}{2000} = 0.20 = 20\%$.
- 2) **Choice A is correct.** (7.SP.5-7.SP.8) Estimated probability for A: $\frac{15}{60} = 0.25$. Theoretical: 0.20. Error = $|0.25 - 0.20| = 0.05$.
- 3) **Choice D is correct.** (7.RP.3) Total cost = $500 + (75 \times 20) = 500 + 1500 = \$2,000$.
- 4) **The correct answer is 1.5.** (7.RP.1-7.RP.3) The unit rate is $6 \div 4 = 1.5$.
- 5) **Choice D is correct.** (7.RP.3) From year 0 to year 1: $\frac{1650}{1500} = 1.10$, so rate is 10%. Verify year 2: $1650 \times 1.10 = 1815$ ✓
- 6) **Choice D is correct.** (7.NS.1-7.NS.3) The absolute value of any number is its distance from zero, which is always non-negative. $|-7| = 7$.
- 7) **Choice A is correct.** (7.EE.1-7.EE.2) GCF of coefficients 30, 18, 6 is 6. Factor: $30x - 18y + 6 = 6(5x - 3y + 1)$.
- 8) **Choice C is correct.** (7.G.4-7.G.6) Base: $9^2 = 81 \text{ m}^2$. Four triangles: $4 \times \frac{1}{2}(9)(12) = 4 \times 54 = 216 \text{ m}^2$. Total: $81 + 216 = 297 \text{ m}^2$.
- 9) **Choice A is correct.** (7.NS.1b) Start at -3 and move 7 units to the right to reach 4. Options B, C, and D either move in the wrong direction or start at the wrong point.
- 10) **Choice A is correct.** (7.EE.1) Option A has like terms $2a$ and $6a$ that have not been combined. All others are fully simplified with no like terms remaining.
- 11) **The correct answer is 3.9375.** (7.RP.1-7.RP.3) Scale: $\frac{1}{2} \text{ inch} : 4 \text{ feet}$ means 1 inch : 8 feet. Dimensions on plan: $18 \div 8 = 2.25$ inches and $14 \div 8 = 1.75$ inches. Area = $2.25 \times 1.75 = 3.9375 \text{ sq in}$.
- 12) **Choice A is correct.** (7.EE.4b) "Product of a number and -2 " is $-2n$; "is greater than 14" is > 14 .
- 13) **Choice D is correct.** (7.NS.1-7.NS.3) Common denominator is 6: $-\frac{5}{6} - \frac{2}{6} = -\frac{7}{6} = -1\frac{1}{6}$.
- 14) **Choice C is correct.** (7.NS.1-7.NS.3) Negative divided by negative is positive: $-\frac{7}{8} \times (-\frac{4}{3}) = \frac{28}{24} = \frac{7}{6}$.
- 15) **Choice D is correct.** (7.NS.2d) Divide $3 \div 4 = 0.75$. The denominator is 2^2 , which divides evenly.
- 16) **Choice A is correct.** (7.NS.1-7.NS.3) Loss of \$12.50 per week for 5 weeks: $-12.50 \times 5 = -62.50$ dollars.
- 17) **Choice A is correct.** (7.NS.1-7.NS.3) $3.7 \times 10^{-6} = 0.0000037$. Move decimal 6 places left.
- 18) **Choice B is correct.** (7.EE.1-7.EE.2) Substitute: $(3)^2 + 3(3) - 5 = 9 + 9 - 5 = 13$.
- 19) **Choice C is correct.** (7.G.1-7.G.5) Set up ratio: $\frac{2 \text{ cm}}{1 \text{ km}} = \frac{5 \text{ cm}}{x}$. Cross-multiply: $2x = 5$, so $x = 2.5 \text{ km}$.
- 20) **Choice C is correct.** (7.G.1-7.G.5) Linear pairs are supplementary: $48 + m = 180^\circ$, so $m = 132^\circ$.
- 21) **The correct answer is A,D.** (7.RP.1-7.RP.3) A and D are true. Relationship A ($y = 4x$) is proportional and has y -intercept 0. Relationship B has constant term 2, so it is not proportional and has y -intercept 2.
- 22) **Choice B is correct.** (7.G.4-7.G.6) Radius is half the diameter: $r = 5 \text{ cm}$. $V = \pi r^2 h \Rightarrow 785 = 3.14 \times 25 \times h \Rightarrow 785 = 78.5h \Rightarrow h = 10 \text{ cm}$.
- 23) **Choice B is correct.** (7.SP.1-7.SP.4) This stratified random sample ensures all classes are represented proportionally. It avoids convenience bias and selection bias.
- 24) **Choice B is correct.** (7.SP.1-7.SP.4) IQR (Interquartile Range) measures the middle 50% of data. Dataset Y's IQR of 25 is larger than Dataset X's IQR of 10, showing greater spread in the middle half.
- 25) **Choice B is correct.** (7.SP.5-7.SP.8) First spinner: 3 outcomes; second spinner: 2 outcomes. Total: $3 \times 2 = 6$ outcomes.
- 26) **Choice B is correct.** (7.NS.1-7.NS.3) $3^2 = 9$ and $3.2^2 = 10.24$. Since 10 is very close to 9, $\sqrt{10} \approx 3.16$, closest to 3.2.
- 27) **Choice A is correct.** (7.EE.1-7.EE.2) Divide coefficients: $14 \div 7 = 2$. Apply quotient rule: $s^7 \div s^3 = s^{7-3} = s^4$. Result: $2s^4$.
- 28) **Choice A is correct.** (7.EE.4a) Daily cost is \$25 per day plus \$15 equipment fee. Equation: $25d + 15 = 115$.
- 29) **Choice B is correct.** (7.EE.3-7.EE.4) Set up: $3m + 5 = 20 \Rightarrow 3m = 15 \Rightarrow m = 5$ months.
- 30) **Choice B is correct.** (7.EE.3-7.EE.4) Equation: $t - 8 = -2$. Add 8: $t = 6^\circ\text{C}$. Check: $6 - 8 = -2$ ✓. Reasonable: starting at 6°C , dropping 8° reaches below zero.



Hi, Calm Solver!

◇ This broad and demanding book gave you seven strong Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. A calm mind can see choices more clearly. That matters in Grade 7, where one problem may have several possible entry points. ◇

★ **Remember this:** You practiced building calm by doing full tests. Each completed page is rehearsal for staying steady when the real test feels serious. ★

Calm-Test Moves

- **Pause:** Give your brain one quiet second.
- **Choose:** Pick the first useful step.
- **Continue:** Do not demand perfection immediately.
- **Check:** Use review time wisely.

Grade 7 test-day tip: If you feel rushed, slow your reading for one sentence. Clear reading saves time.

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

Jay Daie

Your Calm-Test Coach

Practice Today. Succeed Tomorrow!

This book includes **7** 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:

7 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!



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