

3

Utah
RISE

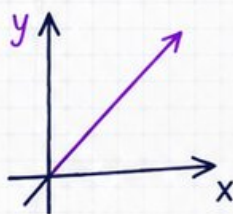
GRADE

7

MATH

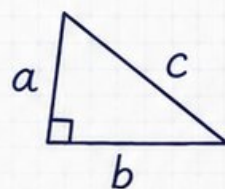
PRACTICE TESTS

- ✓ Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$$



$$3(x - 2) = 2x + 5$$

3 PRINTED
TESTS2 ONLINE
TESTS

USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



Strengthen
Math Skills



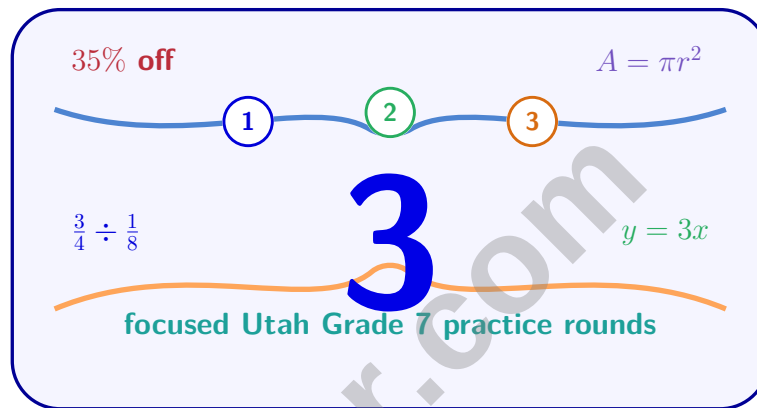
Detailed Answers
& Explanations



Improve Test
Performance

3 Utah RISE Grade 7 Math Practice Tests

RISE Prep Rounds with Answer Keys and Skill Review



Three complete 40-question Grade 7 RISE 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, Utah Grade 7 Problem Solver!

Three focused rounds for sharper RISE math thinking

This book gives you three full Grade 7 RISE 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 Utah 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 three-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.

Utah 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?

Three RISE tests, 120 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Test 3	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
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 random sample of 125 vehicles found 50 were electric cars. The city has 5000 registered vehicles. How many are estimated to be electric?

☐ A. 2000☐ C. 3125☐ B. 2500☐ D. 3750

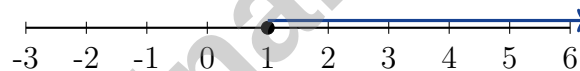
2) Compare two estimates for the same actual value of 80 units. Estimate 1 is 72 units; Estimate 2 is 88 units. Which has less percent error?

☐ A. Estimate 1☐ C. Equal percent error☐ B. Estimate 2☐ D. Estimate 1 is double

3) Expand: $-1(2x - 8)$

☐ A. $-2x - 8$ ☐ C. $-2x + 8$ ☐ B. $2x - 8$ ☐ D. $2x + 8$

4) Which number line shows the solution to $x \geq 1$?

☐ A. Open circle at 1 pointing right☐ C. Closed circle at 1 pointing right☐ B. Closed circle at 1 pointing left☐ D. Open circle at 1 pointing left

5) If 45 is 50% of a number, what is the number?

☐ A. 80☐ C. 90☐ B. 85☐ D. 95

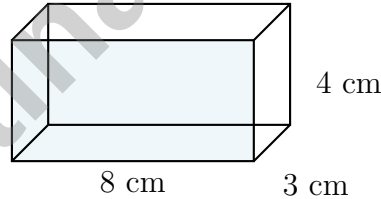
- 6) The difference between two integers is -9 . If one integer is 4, what is the other integer? (Hint: difference means subtract.)

- 7) A principal amount earns \$200 in interest at 8% annual rate over 5 years. What was the original principal?

- ☐ A. \$400 ☐ C. \$600
☐ B. \$800 ☐ D. \$500

- 8) Simplify: $\frac{1}{3}a + \frac{2}{3}a + b$

- ☐ A. $a + b$ ☐ C. $\frac{1}{2}a + b$
☐ B. $\frac{3}{6}a + b$ ☐ D. $a + 3b$



9)

A rectangular prism has dimensions $8\text{ cm} \times 4\text{ cm} \times 3\text{ cm}$. One student mistakenly calculates the surface area as $8 + 4 + 3 = 15$, then multiplies by 2 to get 30 cm^2 . What is the correct surface area?

- ☐ A. 30 cm^2 ☐ C. 136 cm^2
☐ B. 96 cm^2 ☐ D. 192 cm^2



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- 10) A model car is made with a scale of 1 : 18 (model to real). If the model is 9 cm long, how long is the real car?
- ☐ A. 0.5 meters ☐ C. 16.2 decimeters
- ☐ B. 1.62 meters ☐ D. 162 cm
- 11) A laptop originally sells for \$1200. After a 15% discount and applying 8% sales tax on the discounted price, what is the final cost?
- ☐ A. \$1062 ☐ C. \$1080
- ☐ B. \$1020 ☐ D. \$1102.40
- 12) A restaurant gained 48 customers on Monday and lost 30 customers on Tuesday (compared to Sunday). What was the net change in customers over the two days?
- ☐ A. -78 ☐ C. 18
- ☐ B. -18 ☐ D. 78
- 13) A plumber completes $\frac{1}{2}$ of a job in $\frac{2}{3}$ hour. At this rate, how many total hours does it take to complete the entire job?

- 14) Which expression represents “the product of a and b , increased by 10”?
- ☐ A. $a + b + 10$ ☐ C. $(a + b)(10)$
- ☐ B. $ab + 10$ ☐ D. $10ab$



- 1) A recipe calls for $2\frac{1}{2}$ cups of flour, written as $(2 + 0.5)$ cups. A baker triples the recipe. Which expression best shows the distributive property being applied?
- ☐ A. $3 \times 2.5 = 7.5$ ☐ C. $3(2) + 3(0.5)$
☐ B. $3(2 + 0.5)$ ☐ D. 7.5 cups total
- 2) Two scale drawings of the same rectangular field use different scales. Drawing A uses scale 1 cm : 2 km and shows the field as 4 cm by 6 cm. Drawing B shows the same field as 8 cm by 12 cm. What is the scale of Drawing B?
- ☐ A. 1 cm : 1 km ☐ C. 1 cm : 4 km
☐ B. 1 cm : 2 km ☐ D. 2 cm : 1 km
- 3) A cone with base radius r and height h is cut horizontally at height $\frac{h}{3}$ from the base. The radius of the circular cross-section is:
- ☐ A. $\frac{r}{3}$ ☐ C. $\frac{r}{2}$
☐ B. $\frac{2r}{3}$ ☐ D. r
- 4) An angle is 3 times its complement. What is the measure of the larger angle?
- ☐ A. 67.5° ☐ C. 22.5°
☐ B. 45° ☐ D. 90°
- 5) Point $P(4, -3)$ is reflected over the x -axis. What are the coordinates of the image P' ?
- ☐ A. $(-4, -3)$ ☐ C. $(4, 3)$
☐ B. $(-4, 3)$ ☐ D. $(4, -3)$



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- 6) An athlete's personal record was 12 seconds. After training, the record improved to 10.56 seconds. What is the percent decrease in time?

- 7) Two similar squares have side lengths in the ratio 2 : 5. If the smaller square has an area of 16 square units, what is the area of the larger square?

- ☐ A. 40 square units ☐ C. 125 square units
☐ B. 100 square units ☐ D. 225 square units

- 8) A circle has diameter 20 ft. What is its circumference to the nearest tenth? Use $\pi \approx 3.14$.

- ☐ A. 31.4 ft ☐ C. 125.6 ft
☐ B. 62.8 ft ☐ D. 314 ft

- 9) The total surface area of a cylinder with radius r and height h can be expressed as:

- ☐ A. $\pi r^2 + 2\pi rh$ ☐ C. $2\pi r(r + h)$
☐ B. $2\pi rh$ only ☐ D. $\pi r(2r + 2h)$

- 10) Store A has a mean daily sales of \$450 with a MAD of \$30. Store B has a mean of \$480 with a MAD of \$90. Which conclusion is best supported?

- ☐ A. Store A typically sells more than Store B ☐ C. Store B typically sells more, but with less consistency
☐ B. Both stores are equally consistent ☐ D. Store B's sales are more predictable due to lower MAD



- 1) A circle has a diameter of 14 cm. What is its radius?
- ☐ A. 7 cm ☐ C. 21 cm
- ☐ B. 14 cm ☐ D. 28 cm
- 2) A teacher randomly selects one student from a class of 28 students to present. Which probability best matches this uniform model?
- ☐ A. Each student has probability $\frac{1}{28}$ of being selected. ☐ C. Each student has probability 0.5 of being selected.
- ☐ B. Each student has probability $\frac{1}{27}$ of being selected. ☐ D. The probability depends on student grades.
- 3) A rental car company charges \$40 per day plus a 15% insurance premium on the daily rate. For a 5-day rental, what is the total cost?
- ☐ A. \$200 ☐ C. \$250
- ☐ B. \$300 ☐ D. \$230
- 4) A bank offers two savings products: Account 1 earns 7% compound interest on a \$1,200 deposit; Account 2 earns 8% compound interest on a \$1,100 deposit. After 1 year, which account has the greater balance and by how much?
- ☐ A. Account 1 by \$96 ☐ C. Account 1 by \$50
- ☐ B. Account 2 by \$96 ☐ D. Account 2 by \$20



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- 5) A bank statement shows the following transactions in one week:

Transaction	Amount
Starting balance	\$2 500
Debit card purchase	−\$45
Direct deposit (paycheck)	+\$800
ATM withdrawal	−\$100

What is the ending balance?

- ☐ A. \$2 145 ☐ C. \$3 155
☐ B. \$2 255 ☐ D. \$3 255
- 6) A tablet costs \$400 and is discounted by 25%. What is the new price?
- ☐ A. \$100 ☐ C. \$325
☐ B. \$375 ☐ D. \$300
- 7) Simplify: $-3p - 4p + 2p$
- ☐ A. $-5p$ ☐ C. $9p$
☐ B. $-9p$ ☐ D. 0
- 8) A rectangular prism has length 7 cm, width 2 cm, and height 4 cm. What is the total surface area?
- ☐ A. 56 cm^2 ☐ C. 100 cm^2
☐ B. 72 cm^2 ☐ D. 112 cm^2



Utah RISE 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 Utah RISE practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** (7.SP.1-7.SP.4) $\frac{50}{125} = \frac{x}{5000}$. Reduce: $\frac{2}{5} = \frac{x}{5000} \Rightarrow x = 2000$.
- 2) **Choice C is correct.** (7.RP.3) Estimate 1: $\frac{|72-80|}{80} \times 100\% = 10\%$. Estimate 2: $\frac{|88-80|}{80} \times 100\% = 10\%$. Both estimates are equally far from the actual value (8 units away).
- 3) **Choice C is correct.** (7.EE.1-7.EE.2) Distribute -1 : $-1(2x) - 1(-8) = -2x + 8$. This is equivalent to subtracting the entire expression.
- 4) **Choice C is correct.** (7.EE.4b) $x \geq 1$ includes 1, so a closed circle, with the arrow pointing right toward greater values.
- 5) **Choice C is correct.** (7.RP.3) If $45 = 0.50 \times n$, then $n = \frac{45}{0.50} = 90$.
- 6) **The correct answer is 13.** (7.NS.1-7.NS.3) If the difference is $4 - x = -9$, then $x = 4 - (-9) = 4 + 9 = 13$. Check: $4 - 13 = -9$ ✓.
- 7) **Choice D is correct.** (7.RP.3) $200 = P \times 0.08 \times 5 \Rightarrow 200 = 0.4P \Rightarrow P = \500 .
- 8) **Choice A is correct.** (7.EE.1) Combine: $\frac{1}{3}a + \frac{2}{3}a + b = a + b$.
- 9) **Choice C is correct.** (7.G.4-7.G.6) The correct formula: $SA = 2(8 \cdot 4 + 8 \cdot 3 + 4 \cdot 3) = 2(32 + 24 + 12) = 2(68) = 136 \text{ cm}^2$. The student added dimensions instead of multiplying them.
- 10) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply model length by scale factor: $9 \times 18 = 162 \text{ cm}$.
- 11) **Choice D is correct.** (7.RP.3) After discount: $1200 - 0.15(1200) = \$1020$. Tax: $0.08(1020) = \$81.60$. Final: $1020 + 81.60 = \$1102.40$.
- 12) **Choice C is correct.** (7.NS.1b) Net change = $48 + (-30) = 18$. There was a net gain of 18 customers.
- 13) **The correct answer is $\frac{4}{3}$.** (7.RP.1-7.RP.3) If $\frac{1}{2}$ job takes $\frac{2}{3}$ hour, then 1 full job takes $\frac{2}{3} \times 2 = \frac{4}{3}$ hours.
- 14) **Choice B is correct.** (7.EE.1-7.EE.2) Product of a and b is ab . Increased by 10 means add 10: $ab + 10$.
- 15) **Choice A is correct.** (7.EE.1-7.EE.2) The GCF of 9 and 12 is 3. So $9m + 12 = 3(3m + 4)$. (Option B confuses the constant. Option C factors only the variable. Option D uses a decimal.)
- 16) **Choice B is correct.** (7.EE.4b) Set up: $47 + t \geq 200$. Subtract 47: $t \geq 153$. At least 153 more tickets are needed.
- 17) **Choice B is correct.** (7.SP.5-7.SP.8) Each standard die shows 1–6, so (1, 7) is impossible. To get a sum of 7, identify all pairs (a, b) where $a + b = 7$ and $1 \leq a, b \leq 6$. These are the six outcomes listed. The probability is thus $\frac{6}{36} = \frac{1}{6}$.
- 18) **The correct answer is B,D.** (7.SP.1-7.SP.4) Total is $280 + 420 + 100 = 800$. Online: $280/800 = 0.35 = 35\%$, so B is correct. In-store: $420/800 = 0.525 = 52.5\%$, so D is correct. A is wrong (not exactly 50%). C is wrong ($100/800 = 12.5\%$, not 10%).
- 19) **Choice D is correct.** (7.RP.3) Total = $\$500 + (6\% \times \$500) = \$500 + \$30 = \$530$.
- 20) **Choice B is correct.** (7.NS.1-7.NS.3) Start at 0. Descend (go down) 3.5 m: $0 - 3.5 = -3.5 \text{ m}$. Ascend (go up) 1.2 m: $-3.5 + 1.2 = -2.3 \text{ m}$.
- 21) **Choice A is correct.** (7.NS.1-7.NS.3) A loss of \$45 is represented as -45 . Dividing: $(-45) \div 5 = -9$ means each owes \$9 (or is owed \$-9).
- 22) **The correct answer is 10.** (7.RP.1-7.RP.3) Juice to ginger ale is 2 : 3. Total ratio parts: $2 + 3 = 5$. Juice: $\frac{2}{5} \times 25 = 10$ liters.
- 23) **Choice B is correct.** (7.NS.1-7.NS.3) Move decimal 7 places right to get 1. Exponent is -7 .
- 24) **The correct answer is $\frac{1}{12}$.** (7.RP.1-7.RP.3) $k = \frac{3/4}{9} = \frac{3}{4} \times \frac{1}{9} = \frac{3}{36} = \frac{1}{12}$ cup per cupcake.
- 25) **Choice A is correct.** (7.EE.1-7.EE.2) Apply zero exponent rule ($k^0 = 1$) and product rule: $k^8 \cdot 1 \cdot k^2 = k^{8+2} = k^{10}$.
- 26) **Choice D is correct.** (7.G.4-7.G.6) Circle D has $r = 4.5 \text{ in}$, giving $A \approx 3.14 \times 20.25 \approx 63.6 \text{ in}^2$, larger than all others.
- 27) **Choice B is correct.** (7.SP.1-7.SP.4) This question is straightforward and doesn't suggest any particular answer. It is neutral because it simply asks for factual information without bias.
- 28) **Choice A is correct.** (7.SP.1-7.SP.4) Central angle = $\frac{60\%}{100\%} \times 360^\circ = 0.60 \times 360^\circ = 216^\circ$.
- 29) **Choice D is correct.** (7.RP.1-7.RP.3) Check the ratios: $\frac{5}{2} = 2.5$, $\frac{10}{4} = 2.5$, $\frac{17.5}{7} = 2.5$. Because the ratio $\frac{\text{temperature change}}{\text{time}}$ is constant, the relationship is proportional and would pass through the origin. The constant is $k = 2.5$ degrees per minute.



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Hi, Smart Reviewer!

◇ The best learning often happens after the test, when you look back and notice what worked and what needs attention. This short, concentrated book gave you three focused Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** You can use these practice tests as a map. The questions you solved quickly show strengths; the questions you missed show where to train next. ★

Review Routine

- **Sort:** Group mistakes by skill.
- **Reread:** Check whether the question was misunderstood.
- **Resolve:** Do the problem again without looking.
- **Record:** Write the lesson in one sentence.

Grade 7 test-day tip: Review in short focused sessions. Ten careful minutes can be more useful than an hour of rushing.

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

Jay Daie

Your Review Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **3** 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:

3 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answers & Explanations



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Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

WHAT YOU'LL GAIN



Build Confidence

Practice regularly to feel prepared and test-ready.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



Detailed Answers & Explanations

Learn from clear explanations and step-by-step solutions.



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- ✓ Geometry
- ✓ Percents & Decimals
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- ✓ 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.



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