

# 7 Utah RISE

## Grade 6 MATH PRACTICE TESTS

7  
PRINTED  
TESTS  
+  
2  
ONLINE  
TESTS

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

Standards-Aligned *Steady Southern*  
Problem Solving for Comprehensive  
Assessment Program



7 Full-Length  
Printed Tests



Standards-Aligned  
Math Practice



Detailed Answer Keys  
and Explanations



Build Confidence.  
Achieve Success.



You've  
Got  
This!



PREPARE  
PRACTICE  
SUCCEED



PRACTICE  
WITH PURPOSE



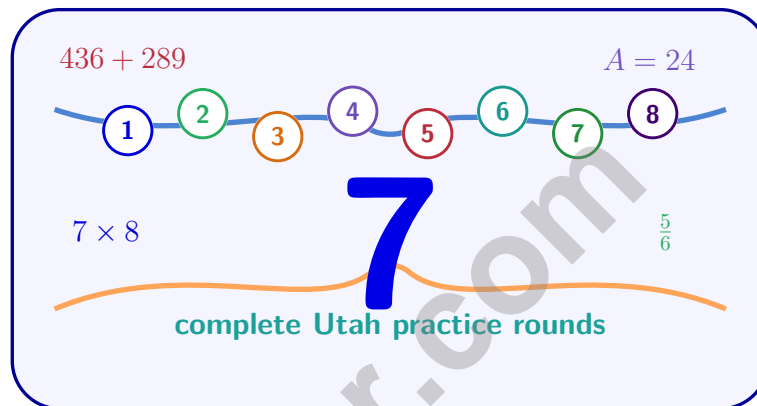
STRENGTHEN  
MATH SKILLS



REVIEW, IMPROVE,  
AND SUCCEED

# 7 Utah RISE Grade 6 Math Practice Tests

*Standards-Aligned Canyon-Clear Review for Readiness Improvement Success Empowerment*



Seven complete 40-question Grade 6 practice rounds for RISE, built for canyon-clear review with ratios, rational numbers, expressions, equations, geometry, statistics, answer keys, and clear explanations for every item.

**Jay Daie and Reza Nazari**



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# Welcome, Utah Math Explorer!

Eight focused rounds using canyon-clear review

This book gives you seven full Grade 6 practice tests for RISE. Each round uses red-rock canyons, mountain roads, and clean strategy steps as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Utah Practice Promise

Follow the layers: understand the question, choose a representation, and check the answer.

Read

Plan

Check

# How to Use This Book

A seven-session routine for canyon-clear review

1. **Work in order.** Take one 40-question test at a time in a quiet place.
2. **Preview the skills.** Scan the quick review pages before beginning the first round.
3. **Correct actively.** Retry missed items before reading the full explanation.
4. **Mark confidence.** Put a small star beside problems where your plan felt strong.
5. **Plan the next round.** Use the growth log to choose one habit and one skill to practice.

**Utah review rhythm:** Finish a round, review the rough edges, and sharpen one tool for the next test.



## What Is Inside?

Eight RISE tests, 320 questions, and a full review path

Part	What You Will Practice
Tests 1–3	Foundation rounds for ratios, rational numbers, operations, and careful reading.
Tests 4–6	Skill-building rounds with expressions, equations, geometry, data, and problem models.
Test 7	Final stamina round for mixed review, neat work, and flexible strategy choices.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Canyon-clear review means recognizing the skill even when the next question changes topic, changes format, or asks for an explanation.



Scan me!  
For more practice  
& answers

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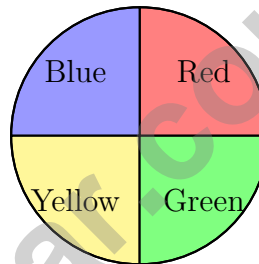


4) A scientist records water temperature ( $^{\circ}\text{C}$ ) in two lakes over 10 days:

Lake	Mean	Median
Lake A	20	20
Lake B	20	18

What can be inferred about the two lakes?

- A. Lake A has some very warm days pulling the mean up  
 B. Lake B is more stable  
 C. Lake B has some unusually warm days  
 D. Both lakes have identical temperature patterns



5)

The spinner above is spun. Which probability is impossible?

- A.  $P(\text{Red}) = 0.25$   
 B.  $P(\text{Blue}) = 0.25$   
 C.  $P(\text{Purple}) = 0.25$   
 D.  $P(\text{Yellow}) = 0.25$

6)

Material	Sand	Gravel
Parts	4	6

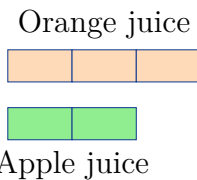
A builder uses sand and gravel in a mixing ratio of 4 : 6. Which of the following is NOT equivalent to this ratio?

- A. 2 : 3  
 B. 8 : 12  
 C. 12 : 18  
 D. 4 : 9



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7) The diagram shows a ratio bar for juice boxes.



Each box represents 1 unit.

What is the ratio of orange juice boxes to apple juice boxes?

- A. 2 : 3                       C. 1 : 3
- B. 3 : 1                       D. 3 : 2
- 8) Sophia wants to buy a phone for \$800. She currently has \$300 in her bank account. Which payment method is most appropriate?
- A. Save more money first, then buy with debit card       C. Use a debit card and go into negative balance
- B. Use a debit card (she has enough)       D. Use a credit card and pay it back over time
- 9) For the data set 2, 4, 6, 8, the mean is 5. Calculate the MAD.
- A. 1                               C. 3
- B. 2                               D. 5
- 10) In a box plot, what portion of the data is represented by the upper whisker only?
- A. The bottom 25%                       C. The top 25%
- B. The middle 50%                       D. All of the data



1) Luis has \$12. His friend gives him  $d$  dollars. How much money does Luis have now?

A.  $12 - d$

B.  $12 + d$

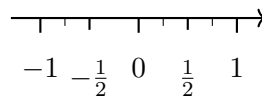
C.  $12d$

D.  $\frac{12}{d}$

2) A factory packages 480 items in 8 boxes. What is the unit rate in items per box?

3) A worker earns \$360 for 40 hours of work. After working an extra 5 hours at the same rate, how much total money does the worker earn?

4) On a zoomed number line from  $-1$  to  $1$  divided into quarters, which fraction is at the third quarter mark?



A.  $\frac{1}{4}$

B.  $\frac{1}{2}$

C.  $\frac{3}{4}$

D.  $\frac{7}{8}$



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- 5) An exchange rate is 1 dollar = 0.85 euros. How many euros is \$50?

Dollars 10 20 30 40 50

Euros 8.5 17 25.5 34 42.5

- A. 35.5 euros                       C. 42.5 euros  
 B. 40.25 euros                       D. 58.8 euros

6)

Inches	12	24	36
Feet	1	2	3

Using the table, which is the correct conversion for 60 inches?

- A. 4 feet                                   C. 6 feet  
 B. 5 feet                                   D. 7 feet
- 7) A scale drawing has a scale of 1 inch = 12 feet. If the actual length of a building is 60 feet, what is its length in the drawing?
- A. 4 inches                                   C. 6 inches  
 B. 5 inches                                   D. 7.2 inches

- 8) Which division problem has a quotient of exactly 125?

- A.  $2,500 \div 25$                                    C.  $3,600 \div 30$   
 B.  $3,000 \div 24$                                    D.  $2,750 \div 25$

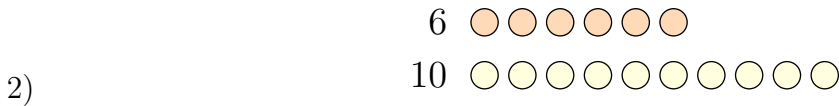
- 9) A deep-sea creature lives at an elevation of  $-5000$  meters. A high-altitude bird lives at an elevation of 8000 meters. What is the vertical distance between them?

- A. 3000 meters                                   C. 5000 meters  
 B. 13000 meters                                   D. 8000 meters



1) Which characteristic indicates a distribution is skewed LEFT?

- A. Mean > Median                       C. Mean = Median  
 B. Median > Mean                       D. Mode > Mean



The diagram represents a ratio of 6 : 10. Which statement about the ratio 6 : 10 is FALSE?

- A. It simplifies to 3 : 5.                       C. It is equivalent to 12 : 20.  
 B. It can be written as  $\frac{6}{10}$  or  $\frac{3}{5}$ .                       D. It is equivalent to 5 : 6.
- 3) A bakery uses vanilla and chocolate in a 7 : 3 ratio. If the bakery makes a batch with 21 units of vanilla, how much chocolate is used?
- A. 3 units                       C. 9 units  
 B. 7 units                       D. 24 units
- 4) A soccer team scores goals in a ratio of 3 goals to every 5 shots attempted. If the team attempts 25 shots, how many goals do they score?

Goals	Shots Attempted
3	5
6	10
?	25

- A. 12                       C. 18  
 B. 15                       D. 20



## Utah RISE Practice Test Answer Keys

### How to use this Utah RISE answer section with a Grade 6 student:

1. check the answer first, then write one quick reason the choice is correct
2. mark questions to try again, especially the skills that feel connected to canyon-clear review
3. rework the problem before reading the full explanation, using this reminder:  
Follow the layers: understand the question, choose a representation, and check the answer.

**A calm Utah correction routine turns every missed item into useful practice. Finish a round, review the rough edges, and sharpen one tool for the next test.**



## Utah Practice Test Answers and Explanations

Review the seven printed RISE tests with clear, balanced, and ready for the next canyon habits.

### Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** **(6.RP.3)** The ratio is  $24 : 4$  or  $6 : 1$ . For 8 hours:  $6 \times 8 = 48$  widgets.
- 2) **Choice B is correct.** **(6.SP.4)** The data has a single peak in the center with equal frequencies decreasing on both sides, characteristic of a symmetric distribution.
- 3) **The correct answer is  $-5$ .** **(6.NS.3)** Start at  $-9$  and move 4 units right:  $-9 + 4 = -5$ .
- 4) **Choice C is correct.** **(6.SP.5)** Lake B's mean ( $20$ )  $>$  median ( $18$ ) indicates high outliers pulling the mean up. These are unusually warm days. Lake A's mean = median suggests a more symmetric distribution.
- 5) **Choice C is correct.** **(6.NS.3)** The spinner has only red, blue, yellow, and green sections. Purple is impossible because it does not appear on the spinner.
- 6) **Choice D is correct.** **(6.RP.3)** The ratio  $4 : 6$  simplifies to  $2 : 3$ . Choices A, B, and C all match that same relationship, but  $4 : 9$  does not simplify to  $2 : 3$ .
- 7) **Choice D is correct.** **(6.RP.3)** The diagram shows 3 orange boxes and 2 apple boxes. Since orange comes first, the ratio is  $3 : 2$ .
- 8) **Choice A is correct.** **(6.SP.4)** With only \$300 and needing \$800, Sophia should save more money first. Using a debit card would overdraw her account (negative balance), and using credit card debt for a purchase like this is not recommended at this grade level.
- 9) **Choice B is correct.** **(6.SP.2)** Distances:  $|2 - 5| = 3$ ,  $|4 - 5| = 1$ ,  $|6 - 5| = 1$ ,  $|8 - 5| = 3$ .  $MAD = \frac{3+1+1+3}{4} = \frac{8}{4} = 2$ .
- 10) **Choice C is correct.** **(6.SP.4)** The upper whisker extends from  $Q_3$  to the maximum, representing the top 25% (the fourth quartile) of the data.
- 11) **Choice A is correct.** **(6.SP.2)** The smallest value in the plot is found by taking the smallest stem (14) with its smallest leaf (0), giving 140 cm.
- 12) **Choice A is correct.** **(6.NS.1)** The 40% section is largest. 40% of 250 is  $0.40 \times 250 = 100$  people, which is more than either 30% section ( $0.30 \times 250 = 75$  each).
- 13) **Choice A is correct.** **(6.SP.4)** A histogram can group related ratings (1–2 as "low," 3 as "medium," 4–5 as "high") to clearly show that 28 out of 50 people were satisfied. The other displays would show individual ratings but not emphasize the grouping.
- 14) **Choice C is correct.** **(6.EE.3)** Substitute:  $2(2.5) + 3 = 5 + 3 = 8$ .
- 15) **Choice D is correct.** **(6.EE.3)** Distribute:  $5(4 - x) = 5 \cdot 4 - 5 \cdot x = 20 - 5x$ .
- 16) **Choice A is correct.** **(6.EE.5)** Divide both sides by 8:  $x = 32 \div 8 = 4$ .
- 17) **Choice D is correct.** **(6.EE.8)** "Cannot go below" means the price must be at least:  $p \geq 2.50$ .
- 18) **The correct answer is 6.** **(6.NS.3)** A negative divided by a negative is positive, and  $18 \div 3 = 6$ .
- 19) **Choice C is correct.** **(6.EE.8)** "Fewer than 10" means strictly less than 10, so  $c < 10$ .
- 20) **Choice C is correct.** **(6.EE.9)** Total cost equals \$50 per month times the number of months:  $T = 50m$ .
- 21) **Choice B is correct.** **(6.G.1)** Area =  $\frac{1}{2}(16 + 12) \times 9 = \frac{1}{2}(28)(9) = 126 \text{ in}^2$ .
- 22) **The correct answer is A (distance:  $|4 - 0| = 4$ ) and B (distance:  $|7 - 3| = 4$ ).** **(6.NS.8)** A has horizontal distance  $|4 - 0| = 4$ , and B has vertical distance  $|7 - 3| = 4$ . Choices C, D, and E have distances 3, 5, and 5 units.
- 23) **Choice D is correct.** **(6.SP.3)** If the original mean is 20, the sum is  $5 \times 20 = 100$ . Multiplying each by 3 gives a new sum of 300, and new mean =  $\frac{300}{5} = 60$ .
- 24) **Choice D is correct.** **(6.RP.2)**  $0.09 \times 100 = 9\%$ .
- 25) **Choice C is correct.** **(6.RP.3)** Scale: 1 inch = 10 miles. Distance:  $3.5 \times 10 = 35$  miles.
- 26) **Choice A is correct.** **(6.NS.2)** Since  $5,200 \div 13 = 400$ , adding 13 to the dividend gives  $5,213 \div 13 = 401$  exactly.
- 27) **The correct answer is 48.** **(6.EE.3)** Substitute  $t = 3$ :  $4(3 + 9) = 4 \times 12 = 48$ .



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For more practice  
& answers

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Lab Notes for a Young Scientist

## Hi, Curious Scientist!

◇ 7 tests. So many experiments! You tested ideas. You watched what worked. You learned a lot. That's how scientists work—and how you work! ◇

★ **Scientists know:** mistakes are facts, not failures. Every problem you missed taught you something. You used those facts to do better next time. ★

### Lab Results

- **Hypothesis:** CONFIRMED! Practice makes you better.
- **Method:** STRONG! You try, watch, and adjust.
- **Data:** CAREFUL! You read and copy numbers right.
- **Conclusion:** READY! You can do this test.

**Scientist tip:** on test day, stay curious. Ask, "What is this asking?" Then experiment with your math tools. You will find the answer!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Scientist

# MASTER TODAY. SUCCEED TOMORROW.

This Grade 6 Math Practice Tests book is designed to help students strengthen their math skills, master important concepts, and build the confidence they need to excel on comprehensive assessments.

With 7 full-length printed tests and 2 online tests, students get the review, practice, and realistic test experience they need to improve accuracy, develop problem-solving abilities, and reach their full potential.

Perfect for classroom use, homework, test preparation, and extra practice at home.



## PERFECT FOR:

- ✓ Classroom Practice
- ✓ Homework & Review
- ✓ Independent Learning
- ✓ Test Preparation
- ✓ Skill Reinforcement
- ✓ Building Confidence

★ PRACTICE TODAY.  
SUCCEED TOMORROW.

## WHAT STUDENTS WILL 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 aligned with standards through meaningful practice.



### Test Confidence

Become familiar with test formats and improve accuracy and speed.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

- ✓ Ratios & Rates
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



### 2 ONLINE TESTS

Extra online practice to reinforce learning and build confidence.

## MORE PRACTICE. GREATER RESULTS.

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



7 FULL-LENGTH  
PRINTED TESTS



STANDARDS-  
ALIGNED PRACTICE



DETAILED ANSWER  
KEYS & EXPLANATIONS