

South Dakota

Smarter Balanced

GRADE 6

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs



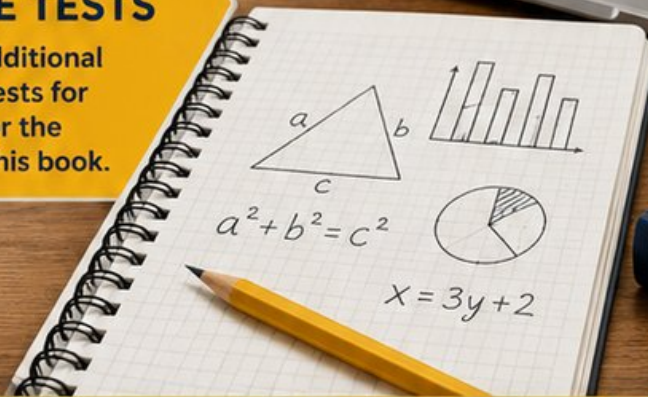
5 PRINTED TESTS

- ✓ Full-Length Practice Tests
- ✓ Realistic Questions
- ✓ Answer Key & Explanations



+ 2 ONLINE TESTS

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

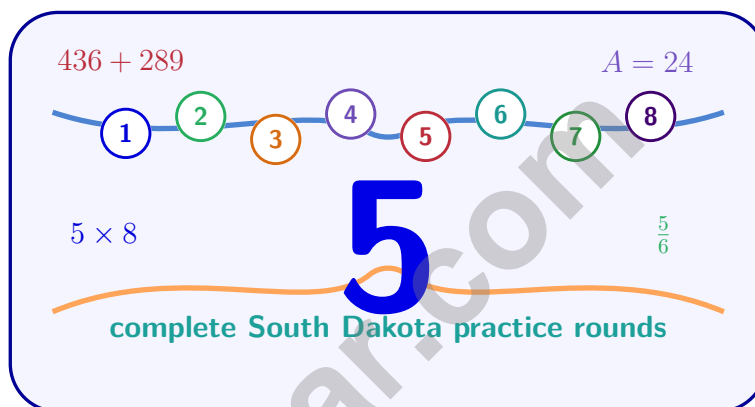


PREPARE • PRACTICE • SUCCEED



5 South Dakota Smarter Balanced Grade 6 Math Practice Tests

Standards-Aligned Prairie-And-Ridge Review for Smarter Balanced Assessment Consortium



Five complete 40-question Grade 6 practice rounds for Smarter Balanced, built for prairie-and-ridge 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, South Dakota Math Explorer!

Eight focused rounds using prairie-and-ridge review

This book gives you five full Grade 6 practice tests for Smarter Balanced. Each round uses open prairie, carved hills, and steady problem checks as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

Your South Dakota Practice Promise

Use wide-open thinking: mark what matters, solve in order, and check if the answer is reasonable.

Read

Plan

Check

How to Use This Book

A five-session routine for prairie-and-ridge 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.

South Dakota review rhythm: Complete a round, review the hard hills, and start the next test with a clearer plan.



What Is Inside?

Eight Smarter Balanced tests, 320 questions, and a full review path

| Part | What You Will Practice |
|--------------|--|
| Tests 1–2 | Foundation rounds for ratios, rational numbers, operations, and careful reading. |
| Tests 3–4 | Skill-building rounds with expressions, equations, geometry, data, and problem models. |
| Test 5 | 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. Prairie-and-ridge 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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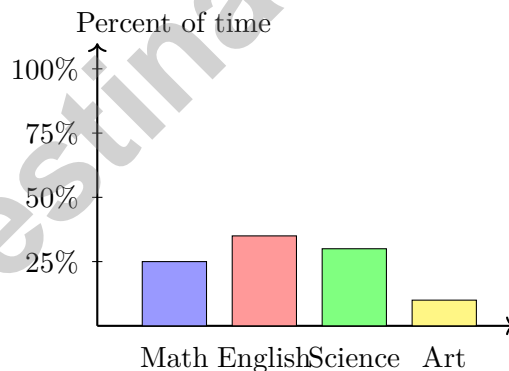
| | | |
|--|-------|----|
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- 1) A recipe calls for 2 cups of flour for every 3 cups of sugar. Which statement correctly describes the table?

| | | | | |
|-------------------------|---|---|---|----|
| Flour (<i>f</i>) | 2 | 4 | 6 | 8 |
| Sugar (<i>s</i>) | 3 | 6 | 9 | 12 |

- A. Proportional; $s/f = 2/3$ throughout
 B. Not proportional; the ratio changes
 C. Proportional; $f/s = 2/3$ throughout
 D. Cannot determine from the table
- 2) Which pair shows equivalent expressions for dividing $\frac{4}{5}$ by $\frac{2}{3}$?

- A. $\frac{4}{5} \times \frac{2}{3}$ and $\frac{8}{15}$
 B. $\frac{4}{5} \div \frac{3}{2}$ and $\frac{12}{10}$
 C. $\frac{4}{5} \times \frac{3}{2}$ and $\frac{12}{10}$
 D. $\frac{2}{3} \times \frac{4}{5}$ and $\frac{6}{20}$



- 3) The bar graph shows how a student spent 20 hours studying different subjects, by percent of total time. How many hours were spent on Science?

- A. 6 hours
 B. 4 hours
 C. 5 hours
 D. 8 hours

4) A printing company prints at two different speeds. Line A prints 240 pages in 4 minutes. Line B prints 300 pages in 6 minutes. Which line prints faster?

A. Line A at 50 pages/min

C. Line B at 50 pages/min

B. Line A at 60 pages/min

D. Line B at 60 pages/min

5) Which fraction is equivalent to 72%?

A. $\frac{72}{1000}$

C. $\frac{100}{72}$

B. $\frac{28}{100}$

D. $\frac{72}{100}$

6) A scale drawing uses a scale of 1 inch = 5 feet. A rectangular room is drawn with dimensions 4 inches by 3 inches. What is the perimeter of the actual room?

A. 28 feet

C. 70 feet

B. 35 feet

D. 140 feet

7) Simplify the ratio 18 : 27.

A. 3 : 2

C. 9 : 6

B. 6 : 9

D. 2 : 3

8) Jordan's ordered scores are 70, 75, 80, 85, 88, 88, 88, 90, 92, 92. Find the median.

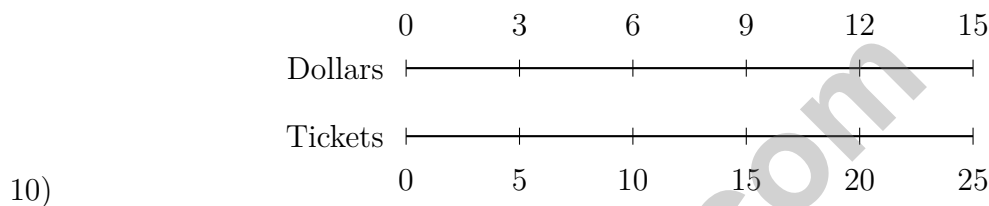


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9) A student claims: “If the ratio of apples to oranges is 7 : 3, then the ratio of oranges to apples must be 3 : 7.”

Is this claim correct?

- A. No, the ratio cannot be reversed.
- B. No, the order does not matter, so both must be 7 : 3.
- C. No, the ratio of oranges to apples should be 7 : 3 as well.
- D. Yes, when the order is reversed, the parts of the ratio are reversed in the same way.



Based on the double number line, which statements are true?

- A. 1 ticket costs \$0.60
 - B. 5 tickets cost \$3
 - C. 25 tickets cost \$15
 - D. All of the above
- 11) The table shows a student’s reading progress at a constant rate. Which equation correctly finds the missing value?

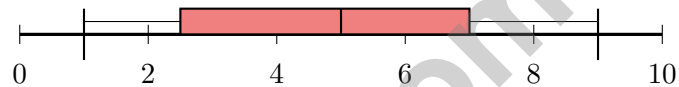
| Days | Pages Read |
|------|------------|
| 3 | 27 |
| 5 | ? |

- A. $27 \div 3 = 9$, so $5 \times 9 = 45$
- B. $27 \times 5 = 135$
- C. $27 - 3 = 24$, then $24 + 5 = 29$
- D. $5 + 27 \div 3 = 14$

1) A student is converting 8 feet to inches. He multiplies by 12 to get 96. Is his work correct?

- A. No, he should divide by 12, not multiply.
- B. No, he should multiply by 3 instead of 12.
- C. No, 8 feet should equal 80 inches.
- D. Yes, 8 feet = 96 inches.

2) Use the box plot below. If the minimum value is 5 and $Q_1 = 12$, what is the length of the lower whisker?

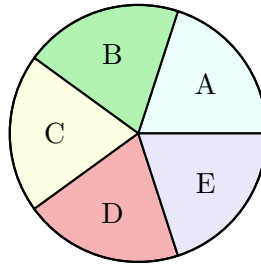


3) Two classes compare their test results using box plots. Class 1: IQR = 10. Class 2: IQR = 25. Which is most accurate?

- A. Class 1 has more students
- B. Class 2 has higher test scores
- C. Class 1's middle 50% of scores are more tightly clustered
- D. Class 1 did better overall



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4)

A spinner has 5 equal sections labeled A, B, C, D, and E. What is the probability of spinning A?

- A. $\frac{1}{5}$
 B. $\frac{2}{5}$

- C. $\frac{1}{3}$
 D. $\frac{1}{2}$

5) A coach records sprint times (in seconds) for 10 runners, creating this stem-and-leaf plot:

| Stem | Leaf |
|------|---------------|
| 11 | 2, 4 |
| 12 | 1, 3, 5, 7, 9 |
| 13 | 0, 2, 8 |

How many runners had times between 12.1 and 12.9 seconds?

- A. 3
 B. 4

- C. 5
 D. 6



1) If $(-6) \times ? = -30$, what is the missing number?

A. -5

C. -36

B. 5

D. 36

2) What is the range of the data set 15, 22, 9, 30, 18?

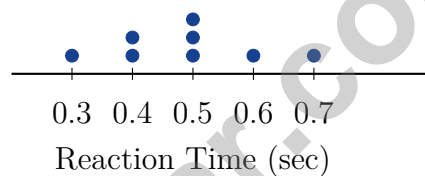
A. 21

C. 9

B. 18

D. 30

3) A dot plot shows reaction times (in seconds) for a reaction test: 0.3, 0.4, 0.4, 0.5, 0.5, 0.5, 0.6, 0.7. What is the mode of this data?



A. 0.4 seconds

C. 0.6 seconds

B. 0.7 seconds

D. 0.5 seconds

4) Two datasets have the same mean of 50 but different standard deviations: Dataset A has $SD = 3$, Dataset B has $SD = 12$. What is the most significant difference?

A. Dataset A is larger.

C. Dataset A is more tightly clustered.

B. Dataset B is larger.

D. They are essentially identical.



5) A jar contains 8 chocolate chip cookies and 2 oatmeal cookies. If you pick one cookie at random, what is the probability you pick an oatmeal cookie?

A. $\frac{1}{5}$

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

C. $\frac{2}{8}$

D. $\frac{4}{5}$

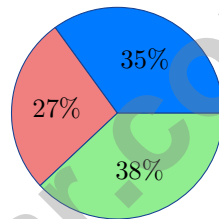
6) Raw data: 71, 78, 75, 82, 79, 81, 76, 83. If organized in a stem-and-leaf plot, what is the value of the 4th data point when listed in order?

A. 76

B. 78

C. 79

D. 81



7)

A clothing store has 720 items in inventory. The circle graph shows $\frac{7}{20}$ are shirts. How many shirts are there?

A. 252

B. 216

C. 200

D. 288

8) A decimal is 0.58. What is this as a percent?

A. 5.8%

B. 58%

C. 0.058%

D. 580%



Scan me!
For more practice
& answers

South Dakota Smarter Balanced Practice Test Answer Keys

How to use this South Dakota Smarter Balanced 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 prairie-and-ridge review
3. rework the problem before reading the full explanation, using this reminder:
Use wide-open thinking: mark what matters, solve in order, and check if the answer is reasonable.

A calm South Dakota correction routine turns every missed item into useful practice. Complete a round, review the hard hills, and start the next test with a clearer plan.



South Dakota Practice Test Answers and Explanations

Review the five printed Smarter Balanced tests with patient, clear, and ready for the next climb habits.

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** **(6.EE.9)** The ratio of flour to sugar is $f/s = 2/3$, $4/6 = 2/3$, $6/9 = 2/3$, $8/12 = 2/3$. The ratio remains constant, so the relationship is proportional.
- 2) **Choice C is correct.** **(6.NS.1)** Invert the divisor $\frac{2}{3}$ to get $\frac{3}{2}$, then multiply: $\frac{4}{5} \times \frac{3}{2} = \frac{12}{10} = \frac{6}{5}$.
- 3) **Choice A is correct.** **(6.RP.3)** Science takes up 30% of the bar (1.2 out of 4 units), which is $0.3 \times 20 = 6$ hours.
- 4) **Choice B is correct.** **(6.RP.2)** Line A: $240 \div 4 = 60$ pages/min. Line B: $300 \div 6 = 50$ pages/min. Line A is faster at 60 pages per minute.
- 5) **Choice D is correct.** **(6.RP.3)** Percent means “per 100.” So $72\% = \frac{72}{100}$.
- 6) **Choice C is correct.** **(6.RP.3)** Actual dimensions: $4 \times 5 = 20$ feet and $3 \times 5 = 15$ feet. Perimeter: $2(20 + 15) = 70$ feet.
- 7) **Choice D is correct.** **(6.RP.1)** The greatest common factor of 18 and 27 is 9. Divide both parts by 9 to get $\frac{18}{9} : \frac{27}{9} = 2 : 3$.
- 8) **The correct answer is 88.** **(6.SP.5)** With 10 scores, the median is the average of the 5th and 6th values: $(88 + 88) \div 2 = 88$.
- 9) **Choice D is correct.** **(6.RP.3)** Yes. If apples to oranges is $7 : 3$, then reversing the order to oranges to apples also reverses the numbers, giving $3 : 7$.
- 10) **Choice D is correct.** **(6.RP.1)** The unit rate is $3 \div 5 = 0.60$ dollars per ticket. Statements A, B, and C are all correct: one ticket at \$0.60, five tickets at \$3.00, and twenty-five tickets at \$15.00.
- 11) **Choice A is correct.** **(6.RP.3)** Find the unit rate (pages per day): $27 \div 3 = 9$ pages/day. For 5 days, multiply: $5 \times 9 = 45$ pages. Choice A uses the correct proportional reasoning.
- 12) **Choice C is correct.** **(6.RP.3)** The ratios are: $\frac{65}{1} = 65$, $\frac{75}{2} = 37.5$, $\frac{85}{3} \approx 28.3$. The ratios are different, so this is not a proportional relationship. The line does not pass through the origin $(0, 0)$, which is required for proportionality.
- 13) **Choice C is correct.** **(6.RP.3)** Unit rate: $2 \div 4 = 0.5$ cups per serving. For 10 servings: $0.5 \times 10 = 5$ cups.
- 14) **Choice B is correct.** **(6.RP.3)** Total mL: $6 \times 500 = 3000$ mL. Convert: $3000 \div 1000 = 3$ liters.
- 15) **Choice B is correct.** **(6.SP.4)** Increase: 10% of $\$60 = 0.10 \times 60 = \6 . New price: $\$60 + \$6 = \$66$.
- 16) **Choice C is correct.** **(6.EE.9)** One year has 12 months: $\$50 \times 12 = \600 .
- 17) **The correct answer is 20.** **(6.NS.3)** Expected number of spins = $0.2 \times 100 = 20$ times.
- 18) **Choice B is correct.** **(6.NS.2, 6.NS.3)** $4,368 \div 21 = 208$. Verify: $21 \times 208 = 4,368$.
- 19) **Choice B is correct.** **(6.NS.3)** Multiply: $2.5 \times 3 = 7.5$ kg.
- 20) **Choice A is correct.** **(6.NS.4)** Factors of 27: 1, 3, 9, 27. Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36. Factors of 54: 1, 2, 3, 6, 9, 18, 27, 54. Common to all: 1, 3, 9. GCF is 9.
- 21) **The correct answer is The box shows the middle 50% (from Q_1 to Q_3), and the whiskers extend to min and max.** **(6.RP.1)** B is correct: the box spans from Q_1 to Q_3 , the middle 50% of the data. E is correct: the whiskers extend out to the minimum and maximum. A is wrong because the median splits the data by count, not necessarily at the numerical center. C is wrong because IQR is $Q_3 - Q_1$, not $\text{max} - \text{min}$. D is wrong because Q_1 is at most equal to the median, not strictly below it (they can be equal when many values cluster at the lower end).
- 22) **Choice A is correct.** **(6.EE.3)** Distributive property: $11(2 + 5) = 11 \cdot 2 + 11 \cdot 5 = 22 + 55 = 77$. Choice A shows the expanded form before combining.
- 23) **Choice A is correct.** **(6.NS.8)** All points on the y -axis have an x -coordinate of 0, regardless of the y -coordinate value.
- 24) **The correct answer is 22.** **(6.SP.4)** Range = $\text{Max} - \text{Min} = 44 - 22 = 22$.
- 25) **Choice C is correct.** **(6.NS.7)** The distance from -0.3 to 0 is 0.3 units, which is smaller than the distances of the other numbers.



Captain's Log

Ahoy, Math Sailor!

◇ You sailed through 5 full tests. Some waters were calm. Some waters were rough. You kept your boat steady the whole way. ◇

★ **Captain's truth:** good sailors stay calm. They use the wind. They check the map. You did all those things on every test. ★

Sailor's Skills

- **Steady Hand:** You stay calm even when problems are tricky.
- **Map Skills:** You read each problem carefully.
- **Brave Spirit:** You believe in yourself.
- **Safe Harbor:** You finish what you start.

Captain's tip: on test day, sail steady. Trust the map you built through 5 practice tests. You will reach safe harbor!

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

Jay Daie

Your Math Captain

PRACTICE MORE. ACHIEVE MORE.

This book provides **5 full-length Math practice tests** designed to help Grade 6 students strengthen their skills, build confidence, and excel on standardized assessments.

Each test is carefully crafted to reflect the latest standards and covers a wide range of math topics with realistic questions and detailed answer explanations.



BUILD CONFIDENCE

Practice builds familiarity and reduces test anxiety.



IMPROVE ACCURACY

Sharpen skills and avoid common mistakes.



ACHIEVE SUCCESS

Consistent practice leads to greater results.

WHAT'S INSIDE?



5 Full-Length Practice Tests

Realistic tests designed to mirror actual exam conditions.



Realistic Questions

A variety of question types to strengthen problem-solving skills.



Answer Keys & Explanations

Detailed solutions to help students learn and improve.



Performance Tracking

Track progress and identify areas that need improvement.



Comprehensive Coverage

All essential topics aligned with Grade 6 math standards.



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FOR MORE PRACTICE TESTS AND LEARNING RESOURCES



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STAY
FOCUSED



SOLVE
CONFIDENTLY



SUCCEED
BRIGHTLY

PREPARE TODAY. **SUCCEED TOMORROW!**