

# 8 Texas STAAR

## GRADE 6

# MATH

# PRACTICE TESTS

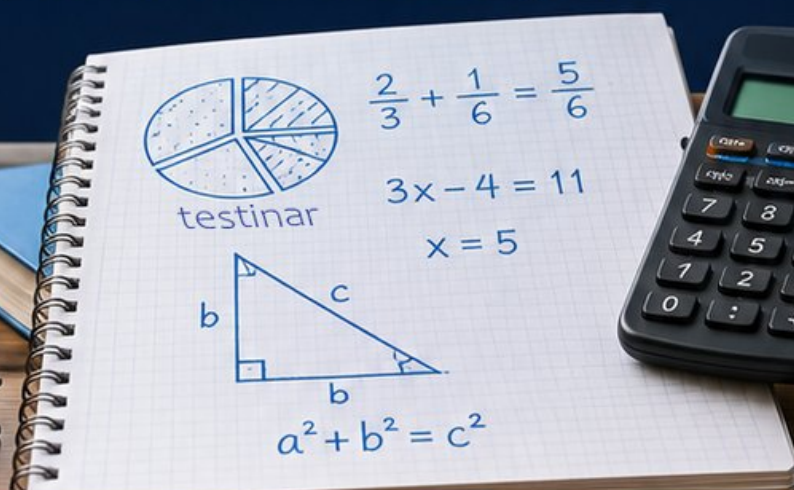
8  
PRINTED  
TESTS

+

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



BUILT FOR  
ACAP SUCCESS



REALISTIC TESTS  
& QUESTION TYPES



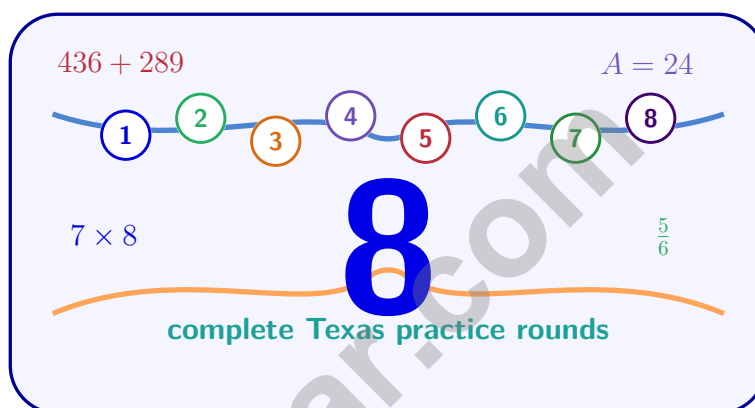
STRENGTHEN  
MATH SKILLS



REVIEW, PRACTICE,  
AND IMPROVE

# 8 Texas STAAR Grade 6 Math Practice Tests

*Standards-Aligned Bold But Careful Reasoning for State of Texas Assessments of Academic Readiness*



Eight complete 40-question Grade 6 practice rounds for STAAR, built for bold but careful reasoning 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, Texas Math Explorer!

Eight focused rounds using bold but careful reasoning

This book gives you eight full Grade 6 practice tests for STAAR. Each round uses big skies, city grids, and confident problem-solving routes as a fresh mental backdrop while you read closely, choose a smart strategy, show your work, and check whether your answer makes sense.

## Your Texas Practice Promise

Make the setup big and clear before doing the math: mark clues, solve, and verify.

Read

Plan

Check

## How to Use This Book

A eight-session routine for bold but careful reasoning

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

**Texas review rhythm:** Work one round, study the hard spots, and return with a stronger plan for the next STAAR-style set.



## What Is Inside?

Eight STAAR 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. |
| Tests 7–8    | Final stamina rounds 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. Bold but careful reasoning 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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6)

| Account  | Balance (\$) |
|----------|--------------|
| Savings  | 250          |
| Checking | -15          |
| Loan     | -100         |

List the accounts from least money to most money.

- A. Savings, Checking, Loan       C. Checking, Loan, Savings  
 B. Loan, Checking, Savings       D. Loan, Savings, Checking

7)

| Expression         | Result |
|--------------------|--------|
| $(-3) \times 5$    | ?      |
| $(-3) \times (-5)$ | ?      |

Which row correctly matches the expressions to their results?

- A. -15 and -15       C. 15 and -15  
 B. 15 and 15       D. -15 and 15

8) Evaluate:  $(4 - 1) \times 2^2 - 1$ 

- A. 6       C. 12  
 B. 20       D. 11

9) Which expression correctly translates “the sum of 2 and the quotient of 8 and a number  $z$ ”?

- A.  $\frac{2+8}{z}$        C.  $z + \frac{8}{2}$   
 B.  $(2+8) \div z$        D.  $2 + \frac{8}{z}$



10) A library has  $b$  books. After receiving a donation of 250 books, it has  $b + 250$  books. Which statement is true?

- A.  $b$  represents the number of books donated  
 B.  $b$  represents the total number of books after the donation  
 C.  $b$  represents the number of books before the donation  
 D. 250 represents the number of books before the donation

11) The table shows the relationship between time and distance for a car traveling at constant speed.

|                  |    |     |     |
|------------------|----|-----|-----|
| Time (hours)     | 1  | 3   | 5   |
| Distance (miles) | 60 | 180 | 300 |

Find the speed of the car in miles per hour.

12) The speed limit on the highway is no more than 65 miles per hour. Which inequality represents the allowed speed  $s$ ?

- A.  $s > 65$   
 B.  $s \leq 65$   
 C.  $s \geq 65$   
 D.  $s = 65$

13) Which graph shows the solution to  $x \geq 4$ ?



- A. Open circle at 4, arrow right  
 B. Closed circle at 4, arrow right  
 C. Open circle at 4, arrow left  
 D. Closed circle at 4, arrow left



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& answers

1) Find the mean of the data set: 4, 6, 8, 10, 12.

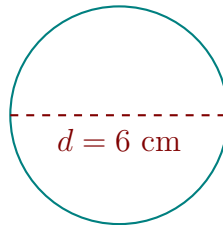
A. 6

C. 10

B. 8

D. 40

Circle B



2)

Circle B has a diameter of 6 cm. What is its approximate area using  $\pi \approx 3.14$ ?

A.  $18.84 \text{ cm}^2$

C.  $37.68 \text{ cm}^2$

B.  $28.26 \text{ cm}^2$

D.  $56.52 \text{ cm}^2$

3) A statistical question about favorite sports should ask about one student or a group of students?

4) The data set is: 5, 7, 8, 9, 10, 11, 12, 50. Which value is an outlier?

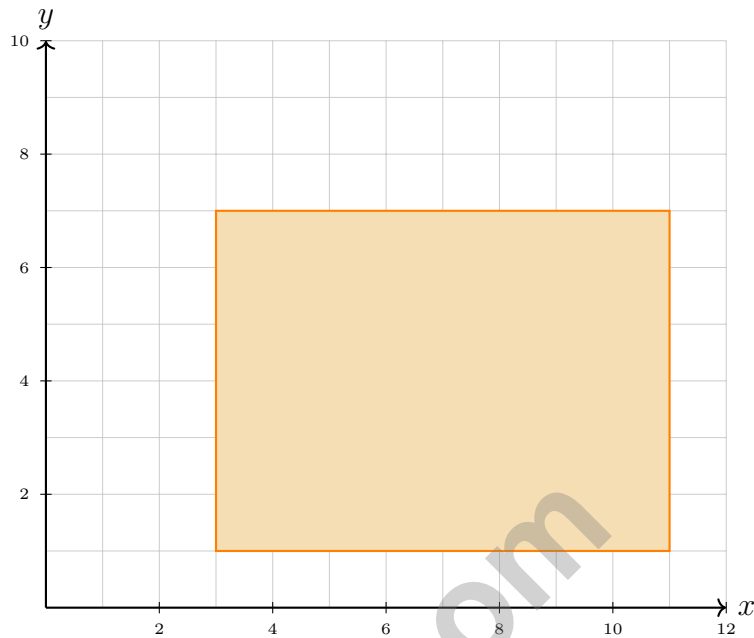
A. 5

C. 50

B. 12

D. 11





5)

A rectangle has vertices at  $(3, 1)$ ,  $(11, 1)$ ,  $(11, 7)$ , and  $(3, 7)$ . What is its area?

- A. 36 square units       C. 48 square units  
 B. 42 square units       D. 54 square units

6) A net shows 5 faces. Can this net form a pyramid or prism?

- A. Rectangular pyramid with a triangular base       C. Triangular prism  
 B. Square pyramid       D. Cannot determine

7) Which of the following statements about the range is true?

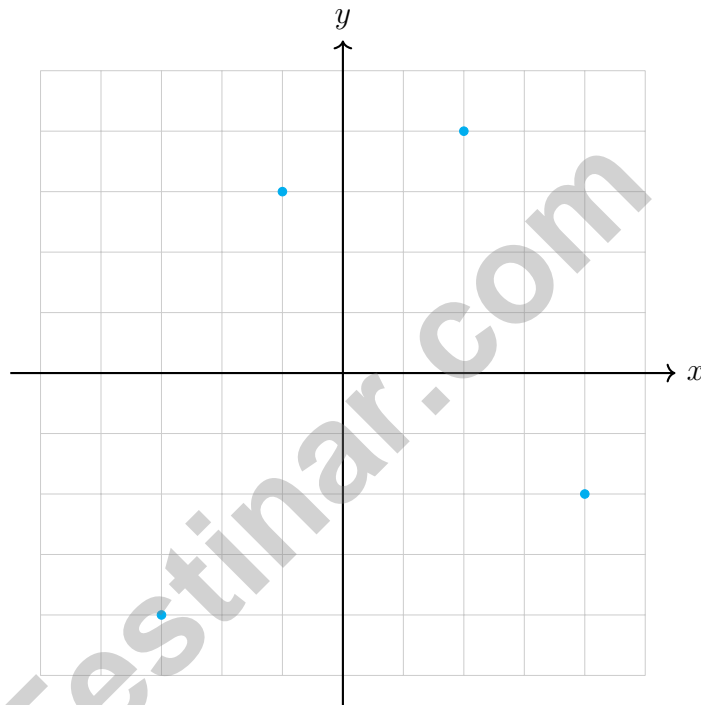
- A. The range is always equal to the median.       C. The range only looks at the maximum and minimum values.  
 B. The range is affected only by the mean.       D. The range is found by adding the maximum and minimum.



Scan me!  
For more practice  
& answers

1) Which question would you answer by collecting data?

- |   |   |
|---|---|
| <input type="checkbox"/> A. What is $5 \times 6$ ?                    | <input type="checkbox"/> C. What are the favorite colors of students in my grade? |
| <input type="checkbox"/> B. How many planets are in our solar system? | <input type="checkbox"/> D. What is the freezing point of water?                  |



2)

Which of the plotted points is in Quadrant III?

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> A. (2, 4)  | <input type="checkbox"/> C. (4, -2)  |
| <input type="checkbox"/> B. (-1, 3) | <input type="checkbox"/> D. (-3, -4) |

3) Which three numbers are correctly ordered from least to greatest?

A.  $-2.1, -1.9, 0.5$

C.  $0.5, -1.9, -2.1$

B.  $-1.9, -2.1, 0.5$

D.  $-1.9, 0.5, -2.1$

4) A bank account has a balance of  $-\$50$  (overdrawn by  $\$50$ ). If the account holder withdraws  $\$15$  more, what is the new balance?

A.  $-\$35$

C.  $\$65$

B.  $\$35$

D.  $-\$65$

5) Evaluate:  $100 - 8 \times 5 + 2^3$

A. 48

C. 70

B. 60

D. 68

6) In the prime factorization  $56 = 2^3 \times 7$ , what is the exponent on 2?

7) A mountaineer climbs from sea level to an elevation of 4000 feet, then descends 2500 feet. At what elevation is the mountaineer now?



Scan me!  
For more practice  
& answers

**Texas STAAR Practice Test Answer Keys****How to use this Texas STAAR 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 bold but careful reasoning
3. rework the problem before reading the full explanation, using this reminder:  
Make the setup big and clear before doing the math: mark clues, solve, and verify.

**A calm Texas correction routine turns every missed item into useful practice. Work one round, study the hard spots, and return with a stronger plan for the next STAAR-style set.**



Scan me!  
For more practice  
& answers

## Texas Practice Test Answers and Explanations

Review the eight printed STAAR tests with confident, careful, and ready for the next route habits.

### Practice Test 1 Answers and Explanations

- 1) Choice A is correct. **6.4(E)**  $\frac{42}{150} = 42 \div 150 = 0.28 = 28\%$ .
- 2) Choice D is correct. **6.8(B)**  $54 = \frac{1}{2} \times b \times 9 \Rightarrow b = 12$  in.
- 3) Choice D is correct. **6.8(B)** Using  $A = b \times h$ :  $75 = b \times 5$ , so  $b = 15$  cm.
- 4) Choice A is correct. **6.3(D)** Divide:  $2.4 \div 4 = 0.6$  meters. Each piece is 0.6 meters long.
- 5) The correct answer is 6. **6.10(B)** Divide both sides by 5:  $x = 30 \div 5 = 6$ . The inverse of multiplying by 5 is dividing by 5.
- 6) Choice B is correct. **6.2(C)** From least to most:  $-100 < -15 < 250$ .
- 7) Choice D is correct. **6.3(D)** Negative times positive is negative:  $(-3) \times 5 = -15$ . Negative times negative is positive:  $(-3) \times (-5) = 15$ .
- 8) Choice D is correct. **6.7(A)** Parentheses:  $4 - 1 = 3$ . Exponent:  $2^2 = 4$ . Multiply:  $3 \times 4 = 12$ . Subtract:  $12 - 1 = 11$ .
- 9) Choice D is correct. **6.7(C)** "The quotient of 8 and  $z$ " is  $\frac{8}{z}$ . "The sum of 2 and" that quotient is  $2 + \frac{8}{z}$ .
- 10) Choice C is correct. **6.9(C)** The expression  $b + 250$  shows starting amount  $b$  plus a 250-book donation. Therefore,  $b$  is the initial count before the donation.
- 11) The correct answer is 60. **6.6(A)** The speed is  $\frac{\text{distance}}{\text{time}}$ . From the table,  $\frac{60 \text{ mi}}{1 \text{ h}} = 60$  mph; or  $\frac{180 \text{ mi}}{3 \text{ h}} = 60$  mph. The constant rate of change is 60 miles per hour.
- 12) Choice B is correct. **6.9(B)** "No more than" means at most 65, which allows 65 and anything less:  $s \leq 65$ .
- 13) Choice B is correct. **6.9(B)**  $x \geq 4$  includes 4 (closed circle) and all numbers greater than 4 (arrow points right).
- 14) Choice A is correct. **6.11** Translating left subtracts from  $x$ :  $C(3, 3) \rightarrow C'(3 - 2, 3) = C'(1, 3)$ .
- 15) Choice C is correct. **6.13(B)** The population is the entire group the researcher wants to learn about: all students in her school. The 50 students she surveyed are the sample, a part of the larger population.
- 16) Choice C is correct. **6.12(C)** Order: 12, 14, 15, 16, 18, 19, 20. The median (4th of 7) is 16.
- 17) Choice C is correct. **6.13(A)** Total in fifth bin:  $250 - (45 + 60 + 75 + 40) = 250 - 220 = 30$  data points.
- 18) The correct answer is Food and Transportation are correctly calculated.. **6.10(A)** A: Housing is  $35\% \times 2000 = \$700$ , not \$800. Incorrect. B: Food is  $25\% \times 2000 = \$500$ . Correct. C: Utilities is  $12\% \times 2000 = \$240$ , not \$260. Incorrect. D: Transportation is  $10\% \times 2000 = \$200$ . Correct. E: Other is  $18\% \times 2000 = \$360$ , not \$450. Incorrect.
- 19) Choice B is correct. **6.5(C)** Using complementary events:  $P(\text{not rain}) = 1 - P(\text{rain}) = 1 - \frac{3}{5} = \frac{2}{5}$ .
- 20) Choice C is correct. **6.13(A)** Stem 8 has 6 leaves: 81, 82, 84, 86, 87, 89.
- 21) Choice A is correct. **6.5(C)** 11.25% of 880 is  $0.1125 \times 880 = 99$  visitors.
- 22) Choice C is correct. **6.4(B)** If the rate is 50 gal/min and the pool needs 2000 gallons, then time =  $2000 \div 50 = 40$  minutes.
- 23) Choice C is correct. **6.5(A)** 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.
- 24) Choice B is correct. **6.5(B)** Tax is 18% of \$75 =  $0.18 \times 75 = \$13.50$ . Total is  $\$75 + \$13.50 = \$88.50$ .
- 25) Choice C is correct. **6.4(H)** Reading the double number line: 3 miles corresponds to 15840 feet.
- 26) Choice A is correct. **6.5(A)** If  $9(2 + 7) = 9 \cdot 2 + 9 \cdot 7 = 18 + 63$ , then the missing factor is 9.



---

Cheer Squad Final Pep Talk

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## Hi, Math Star!

◇ 8 practice tests! That's a LOT of work, and you did it ALL. I am cheering so loud right now. You earned every clap and every cheer! ◇

★ **Cheerleader truth:** confidence is built by showing up. You showed up 8 times. That's real confidence. It is not pretend! ★

### Cheer Roll Call

- **Effort:** 100% YOU SHOWED UP!
- **Heart:** BIG!
- **Skills:** STRONG and growing!
- **Spirit:** BRIGHT!

**Cheer tip:** on test day, be your own cheerleader. Whisper to yourself: "I can do this. I practiced." Tiny cheers make a big difference!

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 Cheerleader

# MASTER MATH. ACE YOUR TESTS.

This Grade 6 Math Practice Tests book is designed to help students build confidence, strengthen math skills, and excel on comprehensive assessments.

With 8 full-length printed tests and 2 online tests, this resource provides realistic practice, a variety of question types, and detailed answer explanations to help students achieve their best.

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

8  
PRINTED  
TESTS

+

2  
ONLINE  
TESTS

## 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.



### Understand Key Concepts

Reinforce important math ideas aligned with standards.



### Test Confidence

Get familiar with test formats and improve accuracy.



### Achieve Success

Build confidence and perform your best on test day.

## TOPICS COVERED

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



8 FULL-LENGTH  
PRACTICE TESTS



2 ONLINE  
PRACTICE TESTS



DETAILED ANSWER  
EXPLANATIONS