

9 Texas STAAR

GRADE 7

MATH

PRACTICE TESTS

Standards Aligned Problem Solving
For Comprehensive Assessment Programs

Program



9 PRINTED
TESTS



2 ONLINE
TESTS



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



BUILT FOR ACAP
Standards-Aligned



**STRENGTHEN
SKILLS**



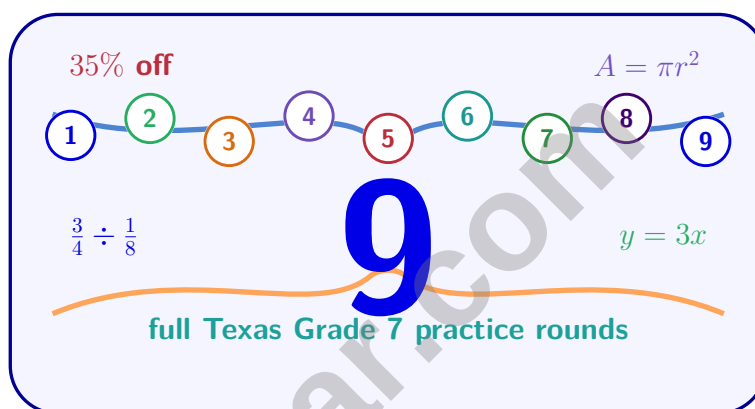
**SHARPEN
THINKING**



BE TEST-READY
Improve Performance

9 Texas STAAR Grade 7 Math Practice Tests

Standards-Aligned Texas Practice for Proportional Reasoning, Expressions, Geometry, Statistics, and Probability



Nine complete 40-question Grade 7 STAAR 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, Texas Grade 7 Problem Solver!

Nine focused rounds for sharper STAAR math thinking

This book gives you nine full Grade 7 STAAR 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 Texas 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 nine-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.

Texas 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?

Nine STAAR tests, 360 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 7–9	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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For more practice
& answers

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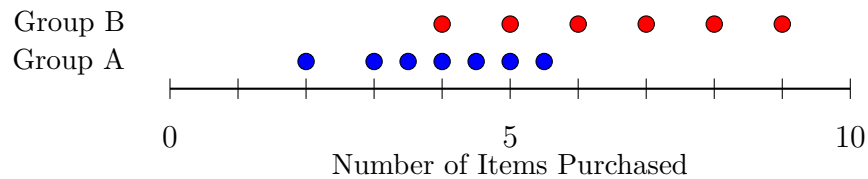
1) Which pair of scales would produce drawings of the same size from the same actual object?

☐ A. 1 cm : 4 m and 2 cm : 6 m

☐ C. 3 mm : 1 m and 6 mm : 3 m

☐ B. 1 in : 12 ft and 1 in : 24 ft

☐ D. $\frac{1}{4}$ in : 1 ft and $\frac{1}{2}$ in : 2 ft



2)

Looking at the dot plots of items purchased, which statement best describes the overlap?

☐ A. Group A typically buys fewer items; ☐ C. No overlap exists between the Groups overlap at 4–5

☐ B. Group B always buys more items than Group A ☐ D. Both groups buy identical amounts

3) A penny, nickel, and dime were tossed together 200 times. The number of times exactly 2 coins landed on heads was 53. What is the experimental probability of getting exactly 2 heads when tossing the three coins?

☐ A. $\frac{2}{3}$

☐ C. 0.27

☐ B. $\frac{53}{200}$

☐ D. 0.375

4) A garden bed is 8 meters long and 4 meters wide. If you scale all dimensions by a factor of $\frac{1}{2}$, what is the new length?



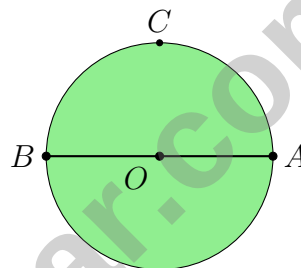
5) A dataset has a minimum value of 34 and a maximum value of 89. If displayed in a stem-and-leaf plot with two-digit stems, how many stems would be needed?

☐ A. 5☐ C. 7☐ B. 6☐ D. 8

6) Convert 2 cubic meters to cubic centimeters. (Hint: 1 m = 100 cm)

☐ A. $2 \times 10^6 \text{ cm}^3$ ☐ C. $2 \times 10^{12} \text{ cm}^3$ ☐ B. $2 \times 10^8 \text{ cm}^3$ ☐ D. $2 \times 10^9 \text{ cm}^3$

7) In the circle below, use the diagram to identify the segment.



The segment from B to A is:

☐ A. A radius☐ C. An arc☐ B. A diameter☐ D. A sector

8) A retailer sells an item for \$110 after marking up the cost by 10%. What was the original cost?

☐ A. \$99☐ C. \$121☐ B. \$95☐ D. \$100

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9) Using the simple interest formula $I = Prt$, how much interest does \$800 earn at an annual rate of 5% over 3 years?

- ☐ A. \$40
☐ B. \$240

- ☐ C. \$125
☐ D. \$120

10) Compute $-6 + (-4)$.

- ☐ A. -10
☐ B. -2

- ☐ C. 2
☐ D. 10

11) A group pays a \$50 entry fee plus \$8 per person. Is total cost proportional to the number of people?

- ☐ A. Yes, $k = 8$
☐ B. Only if more than 6 people attend

☐ C. Yes, $k = 50$

☐ D. No, there is a fixed entry fee

12) A science lab measures temperature change over time. The table below shows the data. Is this a proportional relationship, and if so, what is the constant of proportionality?

Time (min)	Temp Change ($^{\circ}\text{C}$)
2	5
4	10
7	17.5

- ☐ A. Yes, $k = 7$
☐ B. Yes, $k = 5$

☐ C. No, the values don't form a constant ratio

☐ D. Yes, $k = 2.5$



- 1) A beverage vendor mixes drinks using one flavor (Cherry, Lime, or Orange) and one temperature (Hot or Cold). A customer drinks 3 of the 6 possible combinations. How many combinations remain untasted?

☐ A. 2 ☐ C. 4
☐ B. 3 ☐ D. 5

- 2) Look at the table. Is y proportional to x ?

x	3	6	9
y	12	24	36

☐ A. Yes, $k = 12$ ☐ C. No
☐ B. Yes, $k = 3$ ☐ D. Yes, $k = 4$

- 3) A runner covers 3 miles in 30 minutes. At this rate, how many miles does the runner cover per minute?

☐ A. 30 miles per minute ☐ C. 10 miles per minute
☐ B. 0.5 miles per minute ☐ D. 0.1 miles per minute

- 4) A factory produces $\frac{5}{8}$ ton of steel in $\frac{1}{12}$ day. How many tons does it produce in 2 days at this rate?

☐ A. $\frac{10}{96}$ tons ☐ C. 30 tons
☐ B. $\frac{5}{4}$ tons ☐ D. 15 tons

- 5) Which equation represents a proportional relationship with a constant of proportionality of 3?

☐ A. $y = 3x + 2$ ☐ C. $y = \frac{x}{3}$
☐ B. $y = x + 3$ ☐ D. $y = 3x$



6) Factor: $-10x - 20$

☐ A. $-10(x + 2)$

☐ C. $-10(x - 2)$

☐ B. $10(x - 2)$

☐ D. $10(-x - 2)$

7) A delivery service charges \$4.50 base fee plus \$1.25 per mile. What is the cost to deliver a package 12 miles away?

8) A square pyramid has a base with side 4 in and slant height 5 in. What is the surface area?

☐ A. 16 in^2

☐ C. 56 in^2

☐ B. 40 in^2

☐ D. 96 in^2

9) A temperature drops 45°F over 9 hours. What is the average drop per hour?



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1) What is the opposite of 0?

☐ A. -1

☐ B. 1

☐ C. 0

☐ D. Undefined

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

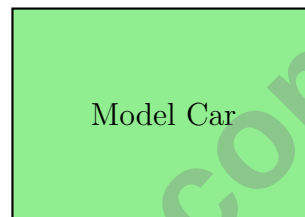
☐ A. $x > -6$

☐ B. $x < -6$

☐ C. $x < 6$

☐ D. $x > 6$

Scale 1 : 32



Length: 8 cm

3)

A scale model of a car is built at a scale of 1 : 32. If the model is 8 cm long, what is the actual length of the car in meters?

☐ A. 1.28 m

☐ B. 2.56 m

☐ C. 25.6 m

☐ D. 256 m

4) A cone is cut by a vertical plane passing through its apex and intersecting the base circle. Which shape is formed?

☐ A. Right triangle

☐ B. Isosceles triangle

☐ C. Equilateral triangle

☐ D. Scalene triangle



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5) Angle P and angle Q are vertical angles. If angle $P = 84^\circ$, what is the measure of angle Q ?

☐ A. 6° ☐ C. 276° ☐ B. 96° ☐ D. 84°

6) A point $E(3, -2)$ is reflected over the y -axis, then translated by $(-1, 4)$. Where does it end up?

☐ A. $(-4, 2)$ ☐ C. $(2, 2)$ ☐ B. $(-4, 4)$ ☐ D. $(-3, 2)$

7) Two similar triangles have a scale factor of $1 : 3$. The smaller triangle has a side of 5 cm. What is the length of the corresponding side in the larger triangle?

☐ A. 5 cm☐ C. 15 cm☐ B. 10 cm☐ D. 35 cm

8) Simplify $6p^2 + 2p - 3p^2 - 5p + 4p^2$, then evaluate when $p = 2$.

9) A circle has circumference 62.8 inches. What is its radius? Use $\pi \approx 3.14$.

☐ A. 5 in☐ C. 20 in☐ B. 10 in☐ D. 40 in

Texas STAAR 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 Texas STAAR practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice D is correct.** (7.G.1-7.G.5) Both scales simplify to the same ratio. D: $\frac{1}{4}$ in : 1 ft = $\frac{1}{4}$ in : 12 in = 1 : 48. And $\frac{1}{2}$ in : 2 ft = $\frac{1}{2}$ in : 24 in = 1 : 48. Both produce the same drawing size. A produces different sizes (1 : 400 vs. 1 : 300), B produces different sizes, C produces different sizes (1 : 333.3 vs. 1 : 500).
- 2) **Choice A is correct.** (7.SP.3) Group A centers at 3–5 (peak at 4). Group B centers at 5–9 (peak at 7). Overlap occurs at 4–5. Group A's lower center is clear despite overlap.
- 3) **Choice B is correct.** (7.SP.6) Exactly 2 heads occurred 53 times in 200 tosses. Experimental probability = $\frac{53}{200} = 0.265 \approx 0.27$.
- 4) **The correct answer is 4.** (7.RP.1-7.RP.3) New length = $8 \times \frac{1}{2} = 4$ meters.
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) The values use stems 3, 4, 5, 6, 7, and 8, so 6 stems are needed.
- 6) **Choice A is correct.** (7.G.4-7.G.6) 1 m = 100 cm, so $1 \text{ m}^3 = (100)^3 = 1,000,000 \text{ cm}^3 = 10^6 \text{ cm}^3$. Thus $2 \text{ m}^3 = 2 \times 10^6 \text{ cm}^3$.
- 7) **Choice B is correct.** (7.G.4-7.G.6) The segment BA passes through the center O and has endpoints on the circle, making it a diameter.
- 8) **Choice D is correct.** (7.RP.3) Selling price = cost $\times (1 + 0.10)$. So $110 = \text{cost} \times 1.10$, giving cost = $110 \div 1.10 = \$100$.
- 9) **Choice D is correct.** (7.RP.3) $I = Prt = 800 \times 0.05 \times 3 = \120 .
- 10) **Choice A is correct.** (7.NS.1b) When adding two negative numbers, add their absolute values and keep the negative sign: $|-6| + |-4| = 10$, so $-6 + (-4) = -10$.
- 11) **Choice D is correct.** (7.RP.1-7.RP.3) Cost = $50 + 8n$. The constant term 50 makes this non-proportional.
- 12) **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.
- 13) **Choice A is correct.** (7.NS.1-7.NS.3) Average = $\frac{9.2+8.8+9.5+9.1+8.9}{5} = \frac{45.5}{5} = 9.1$ seconds.
- 14) **Choice A is correct.** (7.EE.1-7.EE.2) Combine: $(10g + 2g - 3g) + (6 - 8 - 1) = 9g - 3$.
- 15) **Choice B is correct.** (7.EE.1-7.EE.2) An odd exponent preserves the sign of the base: $(-2)^3 = (-2) \cdot (-2) \cdot (-2) = -8$.
- 16) **Choice A is correct.** (7.EE.4b) "The sum of a number and 2" is $n + 2$; "is not equal to 7" is $\neq 7$.
- 17) **The correct answer is 1600.** (7.SP.1-7.SP.4) Set up the proportion: $\frac{80}{250} = \frac{x}{5000}$. Solve: $x = \frac{80 \times 5000}{250} = 1600$.
- 18) **Choice A is correct.** (7.G.1-7.G.5) Scale factor = $\frac{19.5}{13} = 1.5$. Corresponding leg = $5 \times 1.5 = 7.5$ cm.
- 19) **Choice B is correct.** (7.SP.1-7.SP.4) A downward trend means that as price increases, sales tend to decrease. This is a negative association, not a guarantee or causal statement.
- 20) **Choice D is correct.** (7.RP.1-7.RP.3) Unit rate = $\frac{3/8}{1/4} = \frac{3}{8} \times 4 = \frac{12}{8} = \frac{3}{2}$ streams per day.
- 21) **Choice C is correct.** (7.RP.3) Set up $\frac{16}{20} = \frac{p}{100}$. Simplifying: $\frac{16}{20} = \frac{4}{5} = \frac{80}{100} = 80\%$.
- 22) **The correct answer is A,C.** (7.G.4-7.G.6) Option A is correct (60 m^2). Option C is correct (18 m^2). The true total is $60 + 18 = 78 \text{ m}^2$, so D and
- 23) **Choice C is correct.** (7.RP.3) Months needed = $\$800 \div \$50 = 16$ months.
- 24) **Choice B is correct.** (7.NS.1-7.NS.3) Perfect squares are numbers like 4, 9, 16, 25 that are products of a whole number times itself. Since $5 \times 5 = 25$, it is a perfect square.
- 25) **Choice C is correct.** (7.EE.3-7.EE.4) Subtract 5: $-2x = -4$. Divide by -2 : $x = 2$.
- 26) **Choice B is correct.** (7.SP.5-7.SP.8) If $P(\text{YES}) = 0.4 = \frac{2}{5}$, then $\frac{\text{YES slips}}{20} = \frac{2}{5}$, so "YES" slips = $\frac{2}{5} \times 20 = 8$.
- 27) **Choice A is correct.** (7.EE.1-7.EE.2) $\text{gcd}(6, 9) = 3$, so $6x - 9 = 3(2x - 3)$ by factoring out the GCF.
- 28) **The correct answer is 3.** (7.G.1-7.G.5) All three corresponding side lengths match, so the triangles are congruent by SSS.
- 29) **Choice C is correct.** (7.NS.2) $(-4) \times (-5) = 20$ dollars. Negative debt times negative removal (reduction) yields a positive gain. Negative times negative is positive.



Hi, Confident Learner!

◇ This high-stamina book gave you nine substantial Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. Grade 7 math can feel big because it brings together rational numbers, expressions, equations, geometry, probability, and data. ◇

★ **Remember this:** But big topics become manageable when you practice one skill at a time. That is what you have been doing with every test in this book. ★

Confidence Builders

- **Know the Goal:** Identify what the question asks.
- **Use Vocabulary:** Math words point to math actions.
- **Show Work:** Give yourself something to check.
- **Celebrate Effort:** Practice is proof that you are moving.

Grade 7 test-day tip: When reviewing, do not only mark wrong answers. Write one sentence about what you learned from each one.

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

Jay Daie

Your Confidence Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **9** 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:

9 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!

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