9 New Mexico NM MSSA

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 New Mexico NM MSSA Grade 7 Math Practice Tests

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

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Nine complete 40-question Grade 7 NM MSSA 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, New Mexico Grade 7 Problem Solver!

Nine focused rounds for sharper NM MSSA math thinking

This book gives you nine full Grade 7 NM MSSA 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 New Mexico 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.

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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.

New Mexico review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.

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Scan me!
For more practice
& answers

What Is Inside?

Nine NM MSSA 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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1) A bakery divides $\frac{5}{8}$ pound of flour equally among 4 batches. How much flour is in each batch?

☐ A. $\frac{5}{32}$ pound
☐ B. $\frac{5}{12}$ pound
☐ C. $\frac{1}{8}$ pound
☐ D. $\frac{5}{4}$ pounds

2) A car dealership charges a \$500 documentation fee on all vehicles sold. If a car sells for \$22,000, and a salesman earns 3% commission on the base price (before fees), what is the salesman's commission?

☐ A. \$750
☐ B. \$675
☐ C. \$715
☐ D. \$660

3) Two dot plots display the number of glasses of water consumed per day by two fitness groups. Athletic Group: 6, 7, 7, 8, 8, 8, 8, 9 glasses; Casual Group: 2, 3, 4, 8, 9, 10 glasses. Which group shows more consistent hydration behavior?

☐ A. Athletic Group (centered at 8 glasses, range 3)
☐ B. Casual Group (some very low values)
☐ C. Both groups have identical patterns
☐ D. Casual Group (includes higher values up to 10)

4) A game uses a spinner divided into 8 equal sections. The spinner was spun 800 times. One section appeared 85 times. Comparing the experimental and theoretical probabilities, which statement is true?

☐ A. Both equal $\frac{1}{8}$.
☐ B. Experimental is $\frac{85}{800}$; theoretical is $\frac{1}{8}$.
☐ C. Experimental is higher than theoretical.
☐ D. Theoretical is higher than experimental.

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5) A carpenter charges $180 for 6 hours of work. What is the hourly rate?

6) A rectangular prism with volume 500 in^3 has a length of 10 inches and a width of 5 inches. What is the height?

☐ A. 100 in
☐ B. 50 in
☐ C. 10 in
☐ D. 5 in

7) A circle has a diameter of 13.4 mm. What is its radius?

☐ A. 6.7 mm
☐ B. 13.4 mm
☐ C. 20.1 mm
☐ D. 26.8 mm

8) A loan of $5000 has a simple interest rate of 6% per year. What will be the total amount owed after 4 years?

☐ A. $5600
☐ B. $6000
☐ C. $6200
☐ D. $7000

9) A model airplane has a scale of 1 : 72. If a real airplane is 72 meters long, how long is the model?

☐ A. 1 cm
☐ B. 72 cm
☐ C. 1 meter
☐ D. 100 cm

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10) A number line arrow starts at -6 and ends at 9. What integer was added?

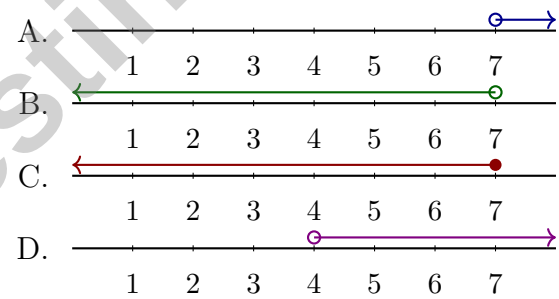
☐ A. -15
☐ B. -3
☐ C. 3
☐ D. 15

11) In a sample of 140 workers, 35 work the night shift. The company employs 4200 people. How many workers are expected to work the night shift?

12) A factory produced 500 items. If 18% were defective, how many defective items were there?

☐ A. 70
☐ B. 80
☐ C. 90
☐ D. 100

13) Solve the inequality $x - 3 < 4$ and identify which number line is correct.



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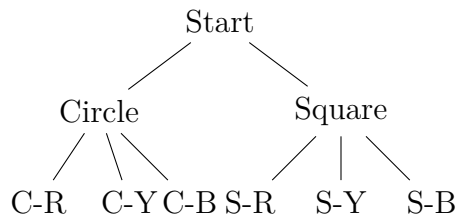
1) A tree diagram shows all outcomes for selecting a shape (Circle or Square) and a color (Red, Yellow, or Blue). How many final branches should the tree have?



☐ A. 2 branches
☐ B. 3 branches
☐ C. 5 branches
☐ D. 6 branches

2) A recipe uses $\frac{3}{4}$ cup of milk for $\frac{1}{3}$ batch. How much milk is needed for a full batch?

☐ A. $\frac{1}{9}$ cup
☐ B. 1 cup
☐ C. $\frac{1}{4}$ cup
☐ D. $2\frac{1}{4}$ cups

3) The constant of proportionality between d (distance) and t (time) is 55 mph. Which equation models this relationship?

☐ A. $d = 55 + t$
☐ B. $d = \frac{t}{55}$
☐ C. $t = 55d$
☐ D. $d = 55t$

4) An online store charges a flat \$5.99 for shipping plus \$2.50 per item. Is the total cost proportional to the number of items?

☐ A. Yes, the equation is $C = 2.50n + 5.99$
☐ B. No, because the equation $C = 2.50n + 5.99$ includes both multiplication and addition
☐ C. Yes, the constant is 2.50
☐ D. No, because there is a constant term (\$5.99)

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

6) If $x \div (-2) = 6$, find x.

7) The equation $y = \frac{4}{5}x$ represents a proportional relationship. Which point lies on the line?

☐ A. $(5, 5)$
☐ B. $(4, 3)$
☐ C. $(4, 5)$
☐ D. $(5, 4)$

8) Simplify: $4m^2 + 7m + 2m^2 - 3m$

☐ A. $6m^2 + 4m$
☐ B. $6m^3 + 4m$
☐ C. $11m^2 + 4m$
☐ D. $6m^2 - m$

9) A compound event is defined as follows: "Flip a coin twice and record the results." If "success" is getting exactly one heads, how many successful outcomes are there in the sample space?

☐ A. 1
☐ B. 2
☐ C. 3
☐ D. 4

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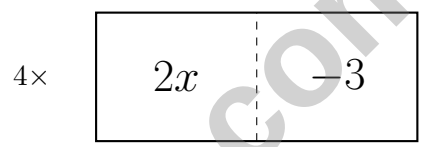
1) A histogram shows the weights (in pounds) of 50 dogs. The intervals are 10–20 lbs, 20–30 lbs, 30–40 lbs, and 40–50 lbs, with frequencies 8, 15, 20, and 7. Which interval contains the mode?

☐ A. 10–20 lbs
☐ B. 20–30 lbs
☐ C. 30–40 lbs
☐ D. 40–50 lbs

2) A jewelry store offers a repair fee of \$40 and charges \$8 per item. If the total is \$120, which equation represents i, the number of items repaired?

☐ A. $8i + 40 = 120$
☐ B. $40i + 8 = 120$
☐ C. $8 + 40i = 120$
☐ D. $40(i + 8) = 120$

3)



$4(2x - 3) = 20$

Solve for x: $4(2x - 3) = 20$

☐ A. $x = 1$
☐ B. $x = 2$
☐ C. $x = 3$
☐ D. $x = 4$

4) A scale drawing of a rectangular parking lot uses scale 1 cm : 3 m. The drawing shows a length of 5 cm. An error occurs and the scale is mistakenly read as 1 cm : 5 m. What incorrect length would someone calculate for the actual parking lot using the wrong scale?

☐ A. 15 m
☐ B. 20 m
☐ C. 25 m
☐ D. 8 m

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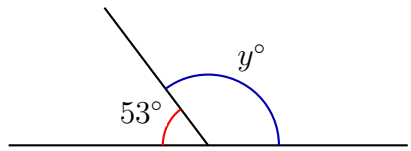
5) A triangular prism with a right-triangular base (legs 3 cm and 4 cm) and height 10 cm is sliced perpendicular to its triangular bases. Which shape could NOT be a cross-section?

☐ A. Triangle
☐ B. Rectangle
☐ C. Pentagon
☐ D. Hexagon

6) 

A ray extends upward from a point on a horizontal line. One angle is 53° and the other is y. These angles are supplementary. Find y.

☐ A. 53°
☐ B. 90°
☐ C. 127°
☐ D. 233°

7) A line segment has endpoints at $(1, 2)$ and $(4, 2)$. After a reflection over the x-axis, what is the length of the reflected segment?

☐ A. 3 units
☐ B. 4 units
☐ C. $\sqrt{13}$ units
☐ D. 6 units

8) A scale drawing of a playground uses a scale of 1 inch = 20 feet. If the actual playground is 80 feet long, how long is the drawing?

☐ A. 2 inches
☐ B. 3 inches
☐ C. 4 inches
☐ D. 5 inches

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New Mexico NM MSSA 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 New Mexico NM MSSA practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

1) **Choice A is correct.** 7.NS.1-7.NS.3 Divide: $\frac{5}{8} \div 4 = \frac{5}{8} \times \frac{1}{4} = \frac{5}{32}$ pound.
2) **Choice D is correct.** 7.RP.3 Commission = commission rate × base price = $0.03 \times 22000 = \$660$. The documentation fee does not affect the commission base.
3) **Choice A is correct.** 7.SP.3 Athletic Group clusters tightly around 8 glasses with range 3 (6–9). Casual Group ranges from 2–10 (range 8) with uneven distribution, indicating less consistent hydration habits.
4) **Choice B is correct.** 7.SP.6 Experimental: $\frac{85}{800} \approx 0.106$. Theoretical: $\frac{1}{8} = 0.125$. The experimental probability came from the observed data.
5) **The correct answer is 30 .** 7.RP.1-7.RP.3 Hourly rate = $180 \div 6 = 30$ dollars per hour.
6) **Choice C is correct.** 7.G.4-7.G.6 $h = \frac{V}{l \times w} = \frac{500}{10 \times 5} = \frac{500}{50} = 10$ inches.
7) **Choice A is correct.** 7.G.4-7.G.6 $r = \frac{d}{2} = \frac{13.4}{2} = 6.7$ mm.
8) **Choice C is correct.** 7.RP.3 First find interest: $I = 5000 \times 0.06 \times 4 = \$1200$. Then $A = P + I = 5000 + 1200 = \$6200$.
9) **Choice C is correct.** 7.RP.1-7.RP.3 Divide the real length by the scale factor: $72 \div 72 = 1$ meter.
10) **Choice D is correct.** 7.NS.1b If -6 plus an unknown value equals 9, then the unknown is 15 because $-6 + 15 = 9$. The distance from -6 to 9 is 15 units.
11) **The correct answer is 1050 .** 7.SP.1-7.SP.4 $\frac{35}{140} = \frac{x}{4200}$. Reduce: $\frac{1}{4} = \frac{x}{4200} \Rightarrow x = 1050$.
12) **Choice C is correct.** 7.RP.3 18% of 500 is $0.18 \times 500 = 90$ items.
13) **Choice B is correct.** 7.EE.4b Add 3: $x < 7$. The boundary is at 7 (open circle, not included), and solutions extend left (all values less than 7).
14) **Choice D is correct.** 7.RP.1-7.RP.3 W: $\frac{0.60}{3/8} = 0.60 \times \frac{8}{3} = 1.60$ \$/lb. X: $\frac{1.00}{1/2} = 2$ \$/lb. Y: $\frac{0.80}{2/5} = 0.80 \times \frac{5}{2} = 2$ \$/lb. Z: $\frac{1.25}{5/6} = 1.25 \times \frac{6}{5} = 1.50$ \$/lb. W is least.
15) **Choice D is correct.** 7.RP.1-7.RP.3 Check the constant-of-proportionality across rows: $\frac{110}{2} = 55$ mph and $\frac{275}{5} = 55$ mph. The ratio is constant, so distance is proportional to time.
16) **Choice D is correct.** 7.RP.1-7.RP.3 The price per notebook is $\frac{24}{8} = 3$ dollars. For 5 notebooks: $5 \times 3 = 15$ dollars.
17) **Choice D is correct.** 7.RP.3 Flowers: $\frac{25}{100} \times 72 = 18$. Vegetables: $72 - 18 = 54$.
18) **Choice B is correct.** 7.NS.1-7.NS.3 Find a common denominator: $-\frac{3}{4} + \frac{2}{4} = -\frac{1}{4}$.
19) **Choice D is correct.** 7.EE.1-7.EE.2 Substitute: $\frac{3(8)}{4} + 1 = \frac{24}{4} + 1 = 6 + 1 = 7$.
20) **The correct answer is A,C.** 7.G.4-7.G.6 Large square: $20 \times 20 = 400$ m^2 (A). Small square: $5 \times 5 = 25$ m^2. Remaining: $400 - 25 = 375$ m^2 (C). The cutout is $\frac{25}{400} = \frac{1}{16}$ of the original area, not $\frac{1}{20}$.
21) **Choice A is correct.** 7.G.1-7.G.5 Supplementary angles sum to 180°: $X = 180 - 47 = 133°$.
22) **Choice C is correct.** 7.G.4-7.G.6 $A = 3.14 \times 9^2 = 3.14 \times 81 = 254.34$ m^2.
23) **Choice D is correct.** 7.RP.3 Starting early maximizes the benefit of time in the market. Longer periods allow more interest to build, demonstrating the Grade-7 concept that time is a key factor in savings growth. Options A, C, and D are false or misleading.
24) **Choice A is correct.** 7.NS.1-7.NS.3 $20 \times 10^1 = 20 \times 10 = 200 = 2.0 \times 10^2$. This is equivalent by adjusting coefficient and exponent by one power of 10.
25) **Choice C is correct.** 7.EE.3-7.EE.4 If $\frac{m}{2} = 9$, then $m = 9 \times 2 = 18$.
26) **Choice B is correct.** 7.SP.5-7.SP.8 There are 4 Kings in 52 cards, so $P(\text{King}) = \frac{4}{52} = \frac{1}{13}$.
27) **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.
28) **Choice B is correct.** 7.SP.1-7.SP.4 After removing 49 from stem 4 and correcting to 94 in stem 9, the maximum becomes 107 (stem 10, leaf 7).
29) **Choice C is correct.** 7.RP.3 Net income percent: $\frac{1530}{1800} = 0.85 = 85\%$.

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Author's Note

A Confident Next Step

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

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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!

Don't lose it—your extra practice and success start here!

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PRACTICE REGULARLY | STAY FOCUSED | SOLVE CONFIDENTLY | SUCCEED BRIGHTLY