

8

New Mexico

NM MSSA

GRADE 7

MATH

PRACTICE TESTS



**Standards Aligned
Problem Solving**

For Comprehensive
Assessment Programs



8 PRINTED TESTS



2 ONLINE TESTS



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



BUILD CONFIDENCE



STRENGTHEN SKILLS



THINK SMARTER



BE TEST-READY

8 New Mexico NM MSSA Grade 7 Math Practice Tests

A confident march through New Mexico Grade 7 unit rates, percent error, equations, transformations, two-population data, and chance



Eight 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!

Eight focused rounds for sharper NM MSSA math thinking

This book gives you eight 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.

Read

Model

Verify

How to Use This Book

An eight-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.



What Is Inside?

Eight NM MSSA tests, 320 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 7–8	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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& answers

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1) Volume Estimates (Liters)

Container	Estimate	Actual
Tank	24	30

What is the percent error for the tank volume estimate?

- ☐ A. 80% ☐ C. 25%
☐ B. 6% ☐ D. 20%

2) Which expression is equivalent to $(4b + 7) + (6b - 12) - (2b + 1)$?

- ☐ A. $8b - 6$ ☐ C. $8b + 18$
☐ B. $10b - 6$ ☐ D. $10b - 8$

3) A music lesson instructor charges a \$30 booking fee and \$35 per hour. If the total is \$135, which equation finds h , the number of hours?

- ☐ A. $30h + 35 = 135$ ☐ C. $35 + 30h = 135$
☐ B. $35h + 30 = 135$ ☐ D. $30(h + 35) = 135$

4) What is x if $9x - 7 = 47$?

- ☐ A. $x = 3$ ☐ C. $x = 6$
☐ B. $x = 5$ ☐ D. $x = 9$

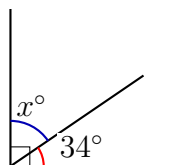
5) Solve for x : $-2(x + 3) = 10$

- ☐ A. $x = -8$ ☐ C. $x = 2$
☐ B. $x = -5$ ☐ D. $x = 5$



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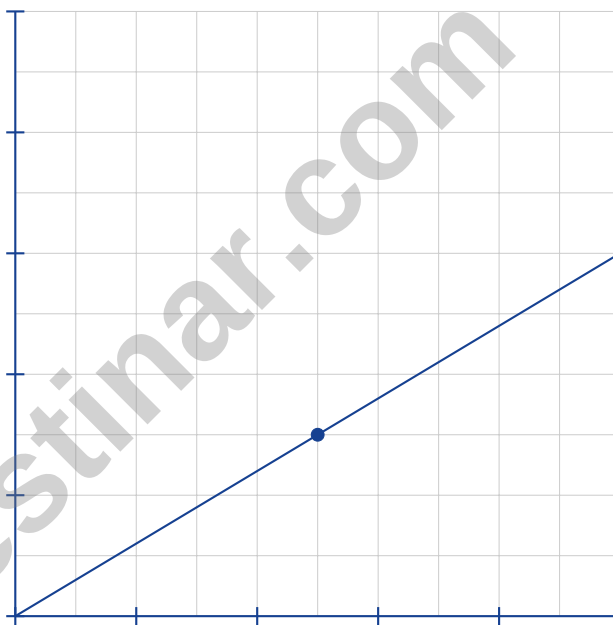
6)



Two rays form a right angle, and a third ray splits it into complementary angles. One angle measures 34° . What is the measure of angle x ?

☐ A. 56° ☐ C. 90° ☐ B. 34° ☐ D. 124°

Problems solved



Minutes studied

7)

A student solves math problems at a constant rate. The graph shows the relationship between minutes studied and problems solved. How many problems are solved in 15 minutes?

☐ A. 6 problems☐ C. 12 problems☐ B. 15 problems☐ D. 9 problems

- 8) A stock investment grows from \$5,000 to \$5,500 in one year. What is the percentage growth?

- 9) A student invests \$1,000 at 5% annual compound interest. Calculate the balance after 2 years.

- 10) A debt of \$150 is split equally among 5 people. How much does each person owe?

- ☐ A. -\$750 ☐ C. \$30
☐ B. -\$30 ☐ D. \$750

- 11) Between which two consecutive integers does $\sqrt{150}$ lie?

- ☐ A. between 10 and 11 ☐ C. between 12 and 13
☐ B. between 11 and 12 ☐ D. between 13 and 14

$$9.5 \times 10^2 = \underline{\hspace{2cm}}$$

$$9.5 \times 10^3 = \underline{\hspace{2cm}}$$

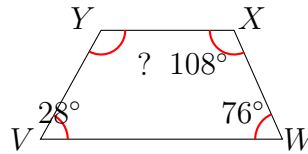
12)

What is the ratio of the second answer to the first?

- ☐ A. 1 ☐ C. 100
☐ B. 10 ☐ D. 0.1



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1)

What is the missing angle measure in the quadrilateral?

☐ A. 108°
☐ C. 148°
☐ B. 128°
☐ D. 168°

2) A teen has \$30 to spend on a new phone and games. If the phone costs \$12, write an inequality for how much g (in dollars) they can spend on games.

☐ A. $g \leq 18$
☐ C. $g + 30 = 12$
☐ B. $12 + g \leq 30$
☐ D. $g > 18$

3) An angle is 3 times its complement. What is the measure of the larger angle?

☐ A. 67.5°
☐ C. 22.5°
☐ B. 45°
☐ D. 90°

4) What is $\frac{3}{4} \times 8$?

☐ A. 6

☐ C. 10

☐ B. 8

☐ D. 12

5) A circle graph shows a restaurant's revenue: Food Sales 60%, Beverages 25%, Merchandise 10%, Other 5%. The Food Sales sector has a central angle of how many degrees?

☐ A. 216 degrees

☐ C. 60 degrees

☐ B. 150 degrees

☐ D. 240 degrees


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6) A bag contains marbles of different colors. If there are 28 marbles and $P(\text{white}) = \frac{1}{4}$, which of these correctly describes the setup?

- ☐ A. 4 white marbles and 24 others. ☐ C. 1 white marble and 27 others.
☐ B. 7 white marbles and 21 others. ☐ D. 14 white marbles and 14 others.

7) A spinner with sections 1, 2, 3, 4, 5 is spun, and a coin is flipped. How many outcomes have an odd number and Heads?

- ☐ A. 2 ☐ C. 5
☐ B. 3 ☐ D. 10

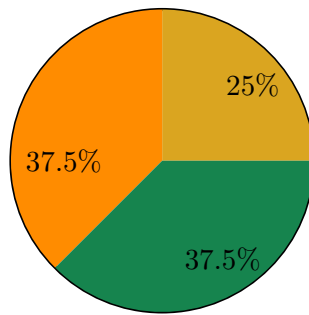
8) A circular clock face has circumference 88 cm. Using $\pi \approx \frac{22}{7}$, what is the radius of the clock?



9) A pair of fair dice is rolled once. What is the probability of rolling a sum of 7 OR a sum of 11?

- ☐ A. $\frac{6}{36}$ ☐ C. $\frac{2}{36}$
☐ B. $\frac{8}{36}$ ☐ D. $\frac{14}{36}$





1)

The circle graph shows student class enrollment distribution. Gold is Algebra (25%), orange is Geometry (37.5%), and coral is Statistics (37.5%). If 800 students are surveyed, how many are in Geometry?

☐ A. 200☐ C. 300☐ B. 250☐ D. 400

2)

x	$x + 3$	$2(x + 3)$	$2(x + 3) - 5$
1	4	8	3
2	5	10	5
3	6	12	7

If $2(x + 3) - 5 = 11$, what is x ? Show steps and verify.

☐ A. $x = 3$ ☐ C. $x = 7$ ☐ B. $x = 5$ ☐ D. $x = 9$

3) A coin lands on Heads with probability $\frac{2}{3}$. Find $P(\text{Tails})$.

☐ A. $\frac{1}{2}$ ☐ C. $\frac{2}{3}$ ☐ B. $\frac{3}{2}$ ☐ D. $\frac{1}{3}$ 

4) A game has a $\frac{1}{3}$ chance of winning and a $\frac{2}{3}$ chance of losing. What is the probability of winning as a decimal (rounded to the nearest hundredth)?

☐ A. 0.33☐ C. 0.5☐ B. 0.67☐ D. 0.2

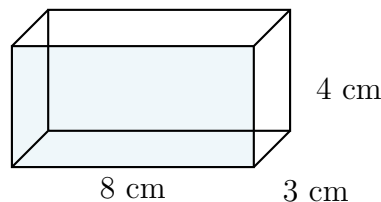
5) Which is the simplest form of $10 - 15$?

☐ A. -5 ☐ C. 25☐ B. 5☐ D. -25

6) A retailer offers two promotions on a \$200 item: (1) Markup by 25%, then apply 15% discount, or (2) Apply 15% discount, then add 25% markup. Which results in a higher final price?

☐ A. Promotion 1 is higher.☐ C. Both yield the same price.☐ B. Promotion 2 is higher.☐ D. Cannot be determined.

7) Factor: $9m + 12$

☐ A. $3(3m + 4)$ ☐ C. $3m(3 + 4)$ ☐ B. $9(m + 12)$ ☐ D. $12(0.75m + 1)$ 

8)

A rectangular prism has dimensions $8 \text{ cm} \times 4 \text{ cm} \times 3 \text{ cm}$. One student mistakenly calculates the surface area as $8 + 4 + 3 = 15$, then multiplies by 2 to get 30 cm^2 . What is the correct surface area?

☐ A. 30 cm^2 ☐ C. 136 cm^2 ☐ B. 96 cm^2 ☐ D. 192 cm^2 

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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 D is correct.** (7.RP.3) Percent error = $\frac{|24-30|}{30} \times 100\% = \frac{6}{30} \times 100\% = 20\%$.
- 2) **Choice A is correct.** (7.EE.1-7.EE.2) Combine step by step: $(4b + 6b - 2b) + (7 - 12 - 1) = 8b - 6$.
- 3) **Choice B is correct.** (7.EE.4a) Booking fee is \$30 plus \$35 per hour. Equation: $35h + 30 = 135$.
- 4) **Choice C is correct.** (7.EE.3-7.EE.4) Add 7: $9x = 54$. Divide by 9: $x = 6$.
- 5) **Choice A is correct.** (7.EE.4a) Distribute: $-2x - 6 = 10$. Add 6: $-2x = 16$. Divide by -2 : $x = -8$.
- 6) **Choice A is correct.** (7.G.1-7.G.5) Complementary angles sum to 90° : $x = 90 - 34 = 56^\circ$.
- 7) **Choice D is correct.** (7.RP.1-7.RP.3) From the marked point $(5, 3)$, the unit rate is $3 \div 5 = 0.6$ problems per minute. At $x = 15$, $y = 15 \times 0.6 = 9$ problems.
- 8) **The correct answer is 10%.** (7.RP.3) Percentage growth = $(\$5,500 - \$5,000) \div \$5,000 = \$500 \div \$5,000 = 0.10 = 10\%$.
- 9) **The correct answer is \$1102.50.** (7.RP.3) Year 1: $1000 \times 1.05 = 1050$. Year 2: $1050 \times 1.05 = 1102.50$.
- 10) **Choice B is correct.** (7.NS.1-7.NS.3) Debt: $-150 \div 5 = -30$ dollars per person.
- 11) **Choice C is correct.** (7.NS.1-7.NS.3) $12^2 = 144$ and $13^2 = 169$. Since $144 < 150 < 169$, we have $12 < \sqrt{150} < 13$.
- 12) **Choice B is correct.** (7.NS.1-7.NS.3) First: 950. Second: 9,500. Ratio: $9,500 \div 950 = 10$.
- 13) **Choice A is correct.** (7.EE.1-7.EE.2) Factoring out p from $p - 0.1p$ gives $p(1 - 0.1) = p(0.9) = 0.9p$. This is the key rewriting.
- 14) **Choice B is correct.** (7.EE.1-7.EE.2) An odd exponent preserves the sign of the base: $(-2)^3 = (-2) \cdot (-2) \cdot (-2) = -8$.
- 15) **Choice A is correct.** (7.EE.3-7.EE.4) If $x + 3 = 0$, then $x = -3$. The diagram starts at -3 , arrow moves right 3 units to reach 0. Check: $-3 + 3 = 0$ ✓.
- 16) **The correct answer is -3 .** (7.NS.1-7.NS.3) The opposite of -3 is 3, and the opposite of 3 is -3 .
- 17) **Choice C is correct.** (7.SP.5-7.SP.8) Each spin is independent: $P(A) = \frac{1}{4}$ and $P(B) = \frac{1}{4}$, so $P(A \text{ and then } B) = \frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$.
- 18) **Choice B is correct.** (7.NS.2) Three groups of -2 : $3 \times (-2) = -6$. The arrows move left 2 units, 3 times, landing on -6 .
- 19) **Choice D is correct.** (7.RP.3) Total haircut revenue = $25 \times 8 = \$200$. Commission = commission rate $\times$ sales = $0.40 \times 200 = \$80$.
- 20) **Choice A is correct.** (7.SP.3) Group 1's data clusters tightly around 12–13 km with a range of 4 km. Group 2 spreads from 5 to 25 km (range 20 km), making it unpredictable. Predictability correlates with small spread.
- 21) **Choice B is correct.** (7.SP.1-7.SP.4) There are 14 values. Lower half: 43, 47, 52, 55, 58, 61, 64 (7 values). Median of lower half (Q1) is the 4th value: 55.
- 22) **The correct answer is B, C.** (7.NS.1-7.NS.3) Choice A: $-\frac{1}{2} + \frac{1}{2} = 0$ (zero, not negative). Choice B: $-3.5 - 2.1 = -5.6$ (negative, correct). Choice C: $4 - 9 = -5$ (negative, correct). Choice D: $\frac{2}{3} + \frac{1}{3} = 1$ (positive).
- 23) **Choice B is correct.** (7.G.4-7.G.6) Square: $8 \times 8 = 64 \text{ m}^2$. Triangle: $\frac{1}{2} \times 8 \times 3 = 12 \text{ m}^2$. Total: $64 + 12 = 76 \text{ m}^2$.
- 24) **Choice C is correct.** (7.RP.1-7.RP.3) Discount: $25\% \times 24 = 0.25 \times 24 = 6$. Sale price: $24 - 6 = 18$.
- 25) **Choice C is correct.** (7.G.4-7.G.6) Side of square = $20/4 = 5 \text{ cm}$. Base area = $5^2 = 25 \text{ cm}^2$. Volume = $25 \times 8 = 200 \text{ cm}^3$.
- 26) **Choice C is correct.** (7.G.1-7.G.5) The third side c must satisfy $|12 - 5| < c$, so $c > 7$. The smallest whole number greater than 7 is 8.
- 27) **Choice B is correct.** (7.G.4-7.G.6) An arc is a portion of the circumference (curved). A chord is a straight line segment with endpoints on the circle. They are different.
- 28) **Choice B is correct.** (7.G.1-7.G.5) Two sides have the same length: $OM = MN = 5 \text{ cm}$. An isosceles triangle has at least two congruent sides. Checking: $4^2 + 5^2 = 41 \neq 25$, so it is not a right triangle.
- 29) **Choice C is correct.** (7.SP.1-7.SP.4) $\frac{84}{200} = \frac{x}{50000}$. Reduce: $\frac{21}{50} = \frac{x}{50000} \Rightarrow x = 21000$.
- 30) **Choice D is correct.** (7.RP.3) Interest owed: $6500 - 5000 = \$1500$. $1500 = 5000 \times r \times 5 \Rightarrow 1500 = 25000r \Rightarrow r = 0.06 = 6\%$.



Hi, Smart Reviewer!

◇ The best learning often happens after the test, when you look back and notice what worked and what needs attention. This wide-ranging book gave you eight serious Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** You can use these practice tests as a map. The questions you solved quickly show strengths; the questions you missed show where to train next. ★

Review Routine

- **Sort:** Group mistakes by skill.
- **Reread:** Check whether the question was misunderstood.
- **Resolve:** Do the problem again without looking.
- **Record:** Write the lesson in one sentence.

Grade 7 test-day tip: Review in short focused sessions. Ten careful minutes can be more useful than an hour of rushing.

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

Jay Daie

Your Review Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **8** 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:

8 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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