

10

New Mexico NM MSSA

GRADE
7
MATH

PRACTICE TESTS

Standards Aligned Problem
Solving For Comprehensive
Assessment Programs



10 PRINTED TESTS

Realistic practice to build
confidence and mastery



2 ONLINE TESTS

Extra practice for
continued success



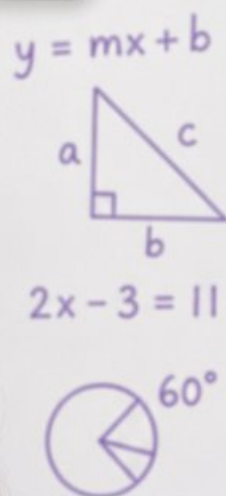
DETAILED ANSWER EXPLANATIONS

Learn with step-by-step
solutions



FOCUSED & EFFECTIVE

Target key math skills
with purposeful practice



10 PRINTED TESTS
+2 ONLINE TESTS

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

PRACTICE ★ REVIEW ★ SUCCEED

10 New Mexico NM MSSA Grade 7 Math Practice Tests

New Mexico Grade 7 NM MSSA Practice for mesa-clear readiness in ratios, percents, rational numbers, expressions, geometry, and probability



Ten 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!

Ten focused rounds for sharper New Mexico NM MSSA math thinking

This book gives you ten 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

A ten-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?

Ten New Mexico NM MSSA tests, 400 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.
Test 10	A final New Mexico round to show growth across the whole book.
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) A car travels 240 miles in 4 hours. What is the car's average speed? Estimate to check reasonableness.

☐ A. 50 mph

☐ C. 80 mph

☐ B. 60 mph

☐ D. 120 mph

2) Simplify: $(6m - 2) - (4m - 8)$

☐ A. $2m + 6$

☐ C. $10m - 10$

☐ B. $2m - 10$

☐ D. $2m - 6$

3) Check which solution is correct for $6x + 2 = 26$.

☐ A. $x = 2$

☐ C. $x = 5$

☐ B. $x = 4$

☐ D. $x = 6$

4) When 6.75 is multiplied by a power of 10 to become 0.000675, what is the exponent?

☐ A. 10^{-2}

☐ C. 10^{-4}

☐ B. 10^{-3}

☐ D. 10^{-5}

5) Two small businesses' monthly profit (in thousands):

Business	Median Profit	MAD
Steady Supply	\$8	\$0.6
Growth Startup	\$8	\$2.5

If you were a risk-averse investor, which is more attractive?

☐ A. Growth Startup (higher variability = higher potential)

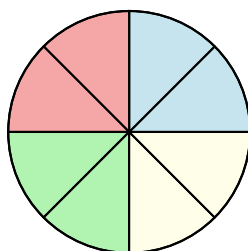
☐ C. Both equally risky

☐ B. Steady Supply (predictable \$8K median, low MAD means stable cash flow)

☐ D. Cannot decide without knowing exact historical profits



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6)

A spinner has 8 equal sections: 2 blue, 2 red, 2 green, and 2 yellow. Which expression shows the complement rule for finding the probability of NOT spinning blue or red?

☐ A. $\frac{2}{8}$
☐ B. $\frac{3}{8}$

☐ C. $1 - \frac{1}{2}$
☐ D. $\frac{6}{8}$

7) A fair die is rolled twice. What is the total number of outcomes in the sample space?

☐ A. 6
☐ B. 12

☐ C. 24
☐ D. 36

8) In a school, 30% of students play soccer and 25% play basketball. If 5% play both, what is the probability a student plays soccer OR basketball?

☐ A. 0.55
☐ B. 0.50

☐ C. 0.40
☐ D. 0.35

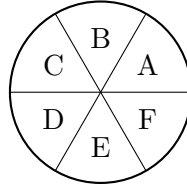
9) Two histograms compare the quiz scores of morning and afternoon classes. The morning class shows bars centered around 85–90, while the afternoon class shows bars centered around 75–80. What does this suggest?

☐ A. Morning students scored higher on average
☐ B. Afternoon students are smarter

☐ C. Both classes performed equally well
☐ D. Quiz difficulty was higher for morning students



- 10) A spinner divided into 6 equal sections was spun 180 times. A tally chart shows section C was selected 36 times. What fraction of the spins resulted in section C?



- ☐ A. $\frac{1}{6}$ ☐ C. $\frac{36}{180}$
☐ B. $\frac{1}{4}$ ☐ D. 0.15
- 11) A survey predicted 450 people would attend a concert. If the actual attendance was 500, what is the percent error?
- ☐ A. 11.1% ☐ C. 10%
☐ B. 50% ☐ D. 9%
- 12) Expand: $\frac{1}{5}(10r + 5)$
- ☐ A. $2r + 1$ ☐ C. $2r + 5$
☐ B. $10r + 1$ ☐ D. $r + 1$
- 13) How much principal is needed to earn \$1000 in simple interest at 8% annually over 5 years?
- ☐ A. \$2000 ☐ C. \$3000
☐ B. \$3500 ☐ D. \$2500
- 14) What is $-7 - (-7)$?
- ☐ A. -14 ☐ C. 14
☐ B. 7 ☐ D. 0



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1) A researcher collects data about exercise habits by surveying 150 people at a gym. Which statement about this sample is true?

- ☐ A. It is a random sample of the general population
- ☐ B. It is representative of all adults' exercise habits
- ☐ C. It is biased because it overrepresents people who exercise regularly
- ☐ D. It has no bias because the sample size is large

2) Two box plots show salaries (in thousands of dollars) for two companies. Company P: Min 30, Q1 40, Median 50, Q3 65, Max 90; Company Q: Min 35, Q1 42, Median 48, Q3 60, Max 85. Which company has higher salaries overall?

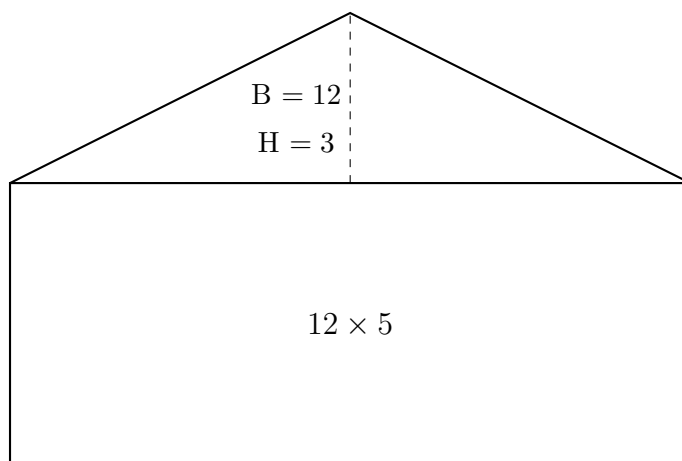
- ☐ A. Company P (higher median and Q3)
- ☐ B. Company Q (higher minimum)
- ☐ C. Both companies pay equally
- ☐ D. Company Q (higher maximum)

3) 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
- ☐ B. 6
- ☐ C. 7
- ☐ D. 8



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4)

A trapezoid-shaped roof can be split into a rectangle (12 m base, 5 m height) and a triangle (12 m base, 3 m height). What is the total roof area?

☐ A. 36 m^2

☐ C. 78 m^2

☐ B. 60 m^2

☐ D. 96 m^2

5) Expand: $(3x + 2) \cdot 5$

☐ A. $3x + 10$

☐ C. $15x + 2$

☐ B. $15x + 10$

☐ D. $8x + 5$

6) Factor: $5x + 25$

☐ A. $5(x + 5)$

☐ C. $5(x + 25)$

☐ B. $5x(1 + 5)$

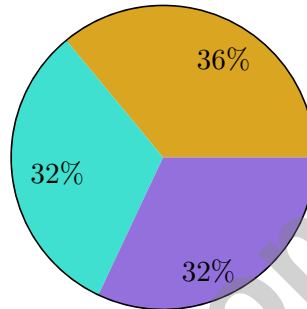
☐ D. $25(x + 1)$

7) An investment earns \$240 in simple interest from a principal of \$2000 over 4 years. What is the annual interest rate as a decimal?



- 1) In a circle, the diameter is 18 cm. A chord in the same circle has a length of 18 cm. What can you conclude?

- ☐ A. The chord must be a radius
- ☐ B. The chord must be a diameter
- ☐ C. The chord is longer than the diameter
- ☐ D. The chord is impossible



2)

The circle graph shows subscription type preferences. Gold is premium (36%), turquoise is standard (32%), and purple is basic (32%). If 2500 customers subscribe, how many have premium subscriptions?

- ☐ A. 700
- ☐ B. 800
- ☐ C. 900
- ☐ D. 1000

- 3) Which is equivalent to $\frac{a^{15}}{a^{10}}$?

- ☐ A. a^5
- ☐ B. a^{25}
- ☐ C. a^{150}
- ☐ D. a^{-5}



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4) An online store charges \$9.99 per item plus a fixed shipping cost of \$5.99. If the total order is \$54.95, how many items were ordered? Which equation is correct?

☐ A. $5.99x + 9.99 = 54.95$

☐ C. $9.99x + 5.99 = 54.95$

☐ B. $9.99 + 5.99x = 54.95$

☐ D. $x(9.99 + 5.99) = 54.95$

5) Solve: $9x - 5 = 49$

☐ A. $x = 4$

☐ C. $x = 6$

☐ B. $x = 5$

☐ D. $x = 7$

6) A rectangle has width x and length $2x + 3$. If the perimeter is 36 cm, what is the width?

☐ A. $x = 4$ cm

☐ C. $x = 6$ cm

☐ B. $x = 5$ cm

☐ D. $x = 8$ cm

7) A spinner has sectors with the following angle measures: 60° , 120° , and 180° . Find the probability of landing on the 120° sector as a fraction.

8) Which error is most common when solving $0.2x - 5 = 3$?

☐ A. Forgetting to add 5 before dividing☐ C. Adding 5 instead of subtracting☐ B. Flipping the operations (subtract then divide)☐ D. Dividing by 0.2 as if it were an integer

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 B is correct.** (7.EE.3-7.EE.4) $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{240}{4} = 60$ mph. Reasonableness check: $60 \text{ mph} \times 4 \text{ hours} = 240$ miles ✓. Estimate: 240 is close to 250; $250 \div 5 \approx 50$, so 60 is reasonable.
- 2) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute the negative: $6m - 2 - 4m + 8 = (6m - 4m) + (-2 + 8) = 2m + 6$.
- 3) **Choice B is correct.** (7.EE.3-7.EE.4) Substitute $x = 4$: $6(4) + 2 = 24 + 2 = 26$ ✓. Subtract 2: $6x = 24$, divide by 6: $x = 4$.
- 4) **Choice C is correct.** (7.NS.1-7.NS.3) $6.75 \times 10^{-4} = 6.75 \times 0.0001 = 0.000675$. The decimal moves 4 places left.
- 5) **Choice B is correct.** (7.SP.1-7.SP.4) Risk-averse investors prioritize predictability. Steady Supply: median \$8K, MAD \$0.6K (consistently around \$8K). Growth Startup: same median but MAD \$2.5K (wildly variable, some months much lower). Steady Supply is safer.
- 6) **Choice C is correct.** (7.SP.5-7.SP.8) Blue or red: $\frac{4}{8} = \frac{1}{2}$. Complement: $1 - \frac{1}{2} = \frac{1}{2} = \frac{4}{8}$.
- 7) **Choice D is correct.** (7.SP.5-7.SP.8) First roll has 6 outcomes; second roll has 6 outcomes. Total: $6 \times 6 = 36$ outcomes.
- 8) **Choice B is correct.** (7.SP.5-7.SP.8) Using $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$: $0.30 + 0.25 - 0.05 = 0.50$.
- 9) **Choice A is correct.** (7.SP.3) The histogram center (where bars cluster) indicates the typical score range. Morning (85–90) is higher than afternoon (75–80), so morning students performed better on average.
- 10) **Choice C is correct.** (7.SP.6) Experimental probability = $\frac{36}{180}$, which simplifies to $\frac{1}{5} = 0.20$. Note that this differs from the theoretical probability of $\frac{1}{6} \approx 0.167$ for an equally likely spinner.
- 11) **Choice C is correct.** (7.RP.3) Percent error = $\frac{|450 - 500|}{500} \times 100\% = \frac{50}{500} \times 100\% = 10\%$.
- 12) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute $\frac{1}{5}$: $\frac{1}{5}(10r) + \frac{1}{5}(5) = 2r + 1$.
- 13) **Choice D is correct.** (7.RP.3) $1000 = P \times 0.08 \times 5 \Rightarrow 1000 = 0.4P \Rightarrow P = \2500 .
- 14) **Choice D is correct.** (7.NS.1-7.NS.3) $-7 - (-7) = -7 + 7 = 0$. Any number minus itself equals 0.
- 15) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply map distance by scale: $4.5 \times 25 = 112.5$ miles.
- 16) **Choice C is correct.** (7.RP.3) If original is \$90 and sale price is \$72, then discount = $(90 - 72)/90 = 18/90 = 0.20 = 20\%$.
- 17) **Choice C is correct.** (7.NS.1b) Net change = $48 + (-30) = 18$. There was a net gain of 18 customers.
- 18) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute: $-3(2x + 5) = -3(2x) + (-3)(5) = -6x - 15$.
- 19) **The correct answer is A,B.** (7.G.4-7.G.6) A is correct: volume $V = B \times h$ for any prism. B is correct: $V = 4^3 = 64 \text{ cm}^3$. C is false: doubling height doubles volume, not triples it. D is false: a triangular prism can have larger volume than a rectangular prism depending on dimensions.
- 20) **Choice B is correct.** (7.SP.1-7.SP.4) 14% of 600 = $0.14 \times 600 = 84$ residents.
- 21) **Choice D is correct.** (7.EE.1-7.EE.2) The work is correct: $5 - 3(2) = 5 - 6 = -1$.
- 22) **The correct answer is 16.** (7.G.4-7.G.6) The longest chord is the diameter: $d = 2r = 2 \times 8 = 16$ inches.
- 23) **Choice A is correct.** (7.EE.1) Combine like terms: $(-2m - 5m) + (3n + n) = -7m + 4n$.
- 24) **The correct answer is 125.6.** (7.G.4-7.G.6) Circumference = $2\pi r = 2 \times 3.14 \times 5 = 31.4$ m. Distance = $4 \times 31.4 = 125.6$ m.
- 25) **The correct answer is 157.** (7.G.4-7.G.6) $V = \pi r^2 h \approx 3.14 \times (2.5)^2 \times 8 = 3.14 \times 6.25 \times 8 = 157 \text{ m}^3$.
- 26) **Choice A is correct.** (7.EE.4b) "A number plus 8" translates to $x + 8$, and "is less than" translates to $<$.
- 27) **Choice D is correct.** (7.RP.1-7.RP.3) Using either marked point: (2, 1) gives $k = 1/2 = 0.5$; (4, 2) gives $k = 2/4 = 0.5$. Constant of proportionality is 0.5.
- 28) **Choice C is correct.** (7.RP.3) Fixed expenses: $40\% + 15\% + 10\% = 65\%$ of \$4,000 = \$2,600. Remainder: $100\% - 65\% = 35\%$ of \$4,000 = \$1,400. Split equally between savings and discretionary: $\$1,400 \div 2 = \700 .
- 29) **Choice A is correct.** (7.NS.1-7.NS.3) Adding two negatives: $-3.6 + (-2.4) = -(3.6 + 2.4) = -6.0$.
- 30) **Choice A is correct.** (7.NS.1-7.NS.3) (A) Neg $\div$ neg = pos: $(-18) \div (-9) = 2$. (B) Neg $\div$ pos = neg. (C) Pos $\div$ neg = neg. (D) Neg $\div$ pos = neg.



Hi, Math Hero!

◇ This full-length book gave you ten complete Grade 7 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. You showed up for Grade 7 practice again and again. That is what real growth looks like: steady effort, honest review, and a willingness to try. ◇

★ **Remember this:** A math hero is not someone who never misses a question. A math hero learns from the miss and comes back stronger. ★

Hero Habits

- **Courage:** You try problems that are not automatic.
- **Honesty:** You review what needs work.
- **Patience:** You let skills grow over time.
- **Pride:** You recognize the effort you gave.

Grade 7 test-day tip: Save one solved problem you are proud of. Looking back at progress helps motivation stay strong.

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

Jay Daie

Your Math Hero Guide

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes 10 full-length Math practice tests and 2 extra 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:

10 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
- ✓ Fractions & Decimals
- ✓ Percents
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ And More!



2 EXTRA 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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SOLVE
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SUCCEED
BRIGHTLY

PRACTICE ★ REVIEW ★ SUCCEED