

5 Full-Length Minnesota MCA Grade 6 Math Practice Tests

Extra Practice for Test Day Success

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EXPLORER'S JOURNEY

5 Practice Tests to Map Your Math Skills!



Welcome, Math Explorer! 

This book is your map through **5 full practice tests**, each one a new trail through every Grade 6 topic — from ratios and integers to geometry and statistics.

Discover what you already know!

Explore the topics that need more work!

Chart your path to test-day confidence!

Every explorer needs a plan. Let's start mapping yours!



“ Five tests means five chances to discover something new about your math skills. Enjoy the journey! ”

Your Exploration Guide

Five trails to discover, five weeks to grow

What's Inside This Book

- **5 Full-Length Practice Tests** — each covers all Grade 6 topics: ratios, integers, expressions, geometry, and statistics.
- **Detailed Answer Explanations** — understand the why behind every answer, not just the what.
- **Formula Reference Sheet** — your trusty map of key formulas.
- **Explorer's Log** — chart your scores and track discoveries!

Your 5-Week Exploration Schedule

One test per week keeps the journey manageable:

Trail 1: Take Test 1 untimed. Explore the terrain and note what you find.

Trail 2: Review weak spots. Take Test 2 with a gentle timer (75 min).

Trail 3: Test 3 timed (60 min). Compare with Test 1 — see the progress!

Trail 4: Deep-focus on remaining tricky topics. Test 4 timed.

Trail 5: Full test conditions. Your final exploration — celebrate the finish!

Multiple Choice

Choose the **best answer** from A, B, C, or D.

 **Explorer's tip:** Read every option before deciding. The correct answer sometimes hides in the last choice!

Open Response

Show your work and write your answer clearly.

 **Explorer's tip:** Think of your solution as a trail map — show every step so someone else could follow your path!

“ After Each Trail ”

Check the Answer Key and read every explanation — especially for questions you missed. Write the tricky topics in your Explorer’s Log. If you need a deeper dive, grab our **Grade 6 Math Study Guide!**

PREVIEW



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The Explorer's Toolkit

Essential strategies for navigating every test

Pack Your Gear (Before the Test)

- ✓ Clear your workspace — remove distractions.
- ✓ Gather pencils, eraser, scratch paper.
- ✓ Take 3 deep breaths.
- ✓ Set your goal: "I'll read carefully and show my work."

Navigate the Trail (During the Test)

1. **Scout first.** Flip through the test to see what's ahead.
2. **Start with what you know.** Answer confident questions first.
3. **Mark the unknowns.** Put a  by tricky ones and return later.
4. **Show every step.** Your solution path matters as much as the answer.
5. **Check the map.** Does your answer make sense in context?

Navigation Tips by Topic

- **Ratios:** Set up a proportion and cross-multiply
- **Integers:** Use a number line to check signs
- **Expressions:** Follow PEMDAS step by step
- **Equations:** Inverse operations to isolate x
- **Geometry:** Draw and label diagrams
- **Statistics:** Order data before finding median

Trail Hazards

- Confusing ratio 3:5 with $\frac{3}{5}$
- Wrong signs when adding integers
- Forgetting exponents in PEMDAS
- Mixing up area formulas
- Reading the wrong axis
- Finding mean instead of **median**



Explorer's Debrief: After each test, go through the answer key carefully. For every wrong answer, ask: did I make a careless mistake, or do I need to study this topic more? Write your findings in the Explorer's Log. That's how real explorers improve — they learn from every expedition!

Pack Your Explorer's Kit

Gather everything you need before each expedition

Your Expedition Gear

- ✓ **Two sharpened pencils** *so you never have to stop mid-trail*
- ✓ **A good eraser** *every explorer course-corrects!*
- ✓ **Scratch paper** *for drawing diagrams and working out steps*
- ✓ **A quiet workspace** *your base camp for concentration*
- ✓ **A timer** *start using around Trail 3*
- ✓ **Curiosity and confidence!** *the explorer's greatest tools*

Allowed on Real Tests

- ✓ Pencil and eraser
- ✓ Scratch paper (provided)
- ✓ Ruler (if specified)
- ✓ Reference sheets (in this book)

Not Allowed

- ✗ Calculator
- ✗ Phone or tablet
- ✗ Textbooks or notes
- ✗ Help from others

For Parents & Teachers

- Spread the 5 tests across **5 weeks** for best results. This gives time to review and study between expeditions.
- Test 1 should be untimed to establish a baseline.
- After each test, review the Answer Key together. Focus on **reasoning**, not just scores.
- Pair this book with our **Grade 6 Math Study Guide** for topics that need extra attention.
- Celebrate progress — every improvement, no matter how small, is a discovery worth noting!

Formula Reference Sheet

Area Formulas

Rectangle $A = l \times w$

Parallelogram $A = b \times h$

Triangle $A = \frac{1}{2} \times b \times h$

Trapezoid $A = \frac{1}{2}(b_1 + b_2) \times h$

Volume

Rectangular $V = l \times w \times h$

Prism

Surface Area

Find the area of each face, then add them all up.

Rectangular Prism:

$$SA = 2lw + 2lh + 2wh$$

Order of Operations

P Parentheses first

E Exponents

M/D Multiply & Divide (left to right)

A/S Add & Subtract (left to right)

Ratios & Percents

Ratio: $a : b$ or $\frac{a}{b}$

Unit rate: amount per 1 unit

Percent: a ratio out of 100

$$\text{Part} = \text{Percent} \times \text{Whole}$$

Integers & Absolute Value

Integers:

$\dots, -3, -2, -1, 0, 1, 2, 3, \dots$

$$|-5| = 5 \quad |5| = 5$$

Absolute value = distance from 0

Expressions & Equations

Exponent: $3^4 = 3 \times 3 \times 3 \times 3 = 81$

Variable: a letter that stands for a number

Equation: two expressions joined by =

Inequality: uses $<$, $>$, \leq , \geq

Coordinate Plane

Ordered pair: (x, y)

x-axis: horizontal **y-axis:** vertical

Origin: $(0, 0)$

Four quadrants (I, II, III, IV)

Statistics

Mean: sum of values \div count

Median: middle value (sorted)

Range: max – min

My Explorer's Log

Record each expedition's results and discoveries

Explorer's Name: _____

Trail	 Date	 Score	 Confidence
1	_____	____ / ____	
2	_____	____ / ____	
3	_____	____ / ____	
4	_____	____ / ____	
5	_____	____ / ____	

PREVIEW

 *My Discovery Journal*

Topics I explored with confidence:

Uncharted territory (topics I need to study more):

My biggest improvement from Trail 1 → Trail 5:

One new strategy I discovered along the way:

One strategy that helped me the most:



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★ *Table of Contents* ★

Here's what we'll explore together!

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Let's learn and have fun!

PREVIEW



PRACTICE TEST

1

Practice Test 1

 30 Questions

Before You Start

- ✓ *Read each question carefully before choosing your answer.*
- ✓ *Show your work on scratch paper when you need to.*
- ✓ *Skip hard questions and come back to them later.*
- ✓ *Check your answers when you're done.*
- ✓ *Take your time — there's no rush!*

★ *You've Got This!* ★

Do your best and show what you know!



6. Liam buys notebooks for \$3 each and pays a \$5 shipping fee. Write an equation for the total cost y for x notebooks. Is this proportional or non-proportional? What is the total cost for 4 notebooks?

Your Answer:

7. A student solved the problem below using "Keep, Change, Flip." Look at the student's work.

Problem: $\frac{4}{5} \div \frac{2}{3}$

Step 1: Keep $\frac{4}{5}$ Change \div to \times

Step 2: Flip $\frac{4}{5}$ to get $\frac{5}{4}$

Step 3: $\frac{5}{4} \times \frac{2}{3} = \frac{10}{12} = \frac{5}{6}$

What error did the student make?

- (A) The student forgot to change \div to \times (B) The student made a multiplication error in Step 3
- (C) The student forgot to simplify (D) The student flipped the wrong fraction

8. Compute $0.288 \div 0.12$.

Your Answer:

9. What is $|-8|$?

- (A) -8 (B) 0
- (C) 8 (D) $-(-8)$



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13. The input-output table below uses the expression $2x + 3$. Which output value is incorrect?

Input (x)	Output ($2x + 3$)
1	5
2	7
3	8
4	11

(A) $x = 1$

(B) $x = 2$

(C) $x = 3$

(D) $x = 4$

14. Which expression is equivalent to $10a - 2a + 7$?

(A) $12a + 7$

(B) $8a + 7$

(C) $8a - 7$

(D) $15a$

15. A pizza costs \$14 and is split equally among f friends. Which expression shows each friend's share?

(A) $14f$

(B) $14 + f$

(C) $14 - f$

(D) $14 \div f$

16. An amusement park says "Children under 3 get in free." Which inequality describes the ages that get in free?

(A) $a > 3$

(B) $a \leq 3$

(C) $a < 3$

(D) $a \geq 3$



17. Describe the graph of $x > 1$: What kind of circle? Which direction to shade?

Your Answer:

18. Look at the input-output table below. Which equation describes the relationship?

Input (x)	Output (y)
0	3
1	5
2	7
3	9
4	11

(A) $y = x + 3$

(B) $y = 3x$

(C) $y = 2x + 3$

(D) $y = x + 5$

19. A triangle has an area of 60 cm^2 . If the height is 15 cm, what is the base?

Your Answer:

20. What is the volume of a rectangular prism with length 5 cm, width 3 cm, and height 4 cm?

(A) 12 cm^3

(B) 60 cm^3

(C) 30 cm^3

(D) 94 cm^3

21. A right triangle has vertices $(0,0)$, $(8,0)$, and $(0,6)$. What is the area?

(A) 48 square units

(B) 24 square units

(C) 14 square units

(D) 28 square units



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22. A cube has edge length 3 cm. What is the surface area?

- (A) 9 cm^2 (B) 27 cm^2
(C) 36 cm^2 (D) 54 cm^2

23. A circle has a diameter of 18 inches. What is its area? Use $\pi \approx 3.14$.

Your Answer:

24. What makes a question statistical?

- (A) It can be answered with a number. (B) It is about a math topic.
(C) The answers are expected to vary. (D) It has exactly one correct answer.

25. Data (in order): 2, 5, 8, 11, 14, 17, 20. Find the range, Q1, Q3, and IQR.

Your Answer:

26. Can you find the exact mode from a histogram? Explain.

Your Answer:

27. A box plot has the median line closer to Q1 than to Q3. What does this mean?

- (A) The data is perfectly symmetric. (B) The upper half of the data is more spread out than the lower half.
(C) The lower half is more spread out. (D) The data has no outliers.



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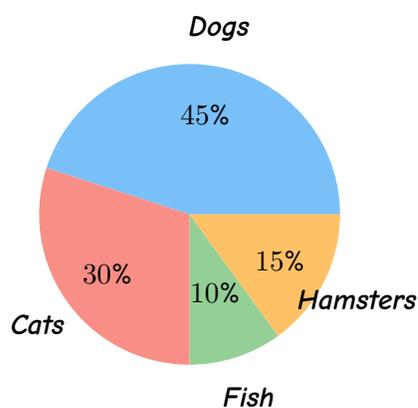
28. Restaurant A wait times (min): median = 12, IQR = 4. Restaurant B: median = 10, IQR = 10. Which restaurant has shorter typical wait times? Which has more predictable wait times?

- (A) B shorter, B more predictable (B) B shorter, A more predictable
(C) A shorter, A more predictable (D) A shorter, B more predictable

29. A standard number cube is rolled once. What is the probability of rolling an odd number? Write your answer as a fraction in simplest form.

Your Answer:

30. A class of 60 students voted on a class pet. The circle graph below shows the results.



How many **more** students voted for Dogs than for Cats?

- (A) 6 (B) 9
(C) 15 (D) 18



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★ *End of Practice Test 1* ★

Great job finishing the test!

 **My Score**

I got _____ out of 30 questions right.

*Check your answers in the **Answer Key** at the back of the book.*

 *Review any questions you missed. That's how we learn!*

THANK YOU

Enjoyed This Preview?

Get the Full Book!

This preview shows just a small sample of what's inside.

The complete book includes:

- ✓ *All chapters and topics*
- ✓ *Hundreds of practice problems*
- ✓ *Complete answer key with explanations*
- ✓ *Colorful visuals and step-by-step examples*
- ✓ *Reference sheets and progress trackers*

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