

Minnesota MCA Grade 9 Math Quizzes

Quick Topic Assessments with Answer Key

Dr. A. Nazari

Copyright © 2026 Dr. A. Nazari

Published by View Math Education

ViewMath.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

The information in this book is distributed on an “as is” basis, without warranty. While every precaution has been taken in the preparation of this work, neither the author nor the publisher shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the information contained in this book.

Copyright © 2026

QUICK QUIZZES FOR EVERY TOPIC

Algebra 1 Math Quizzes

Topic Quizzes • Chapter Reviews • Answer Key

Quick, focused quizzes are one of the best ways to find out what you really know — and what you still need to work on.

This book has a short quiz for every Algebra 1 topic. Each one takes about 10–15 minutes and covers the most important skills for that section. Take a quiz, score it, and see exactly where you stand.

Use it after studying a topic, the night before a test, or anytime you want a fast check-in on your algebra skills.



Take the Quiz

*10–15 minutes
per quiz*



Score It

*Check every answer
in the key*



Review & Retry

*Study what you missed
then quiz again*

How to Use This Book

1 *Pick a topic you've been studying*

Look through the table of contents and find the quiz that matches the topic you just covered in class or in your study guide.

2 *Set a timer for 10–15 minutes*

Give yourself a reasonable time limit. Working with a timer helps you build speed and stay focused — just like a real test.

3 *Answer every question*

Try each problem. If you get stuck, skip it and come back at the end. Don't leave any question blank — a good guess is better than no answer.

4 *Check your answers*

Use the answer key in the back. Mark each question right or wrong. Write your score on the quiz page and track your progress over time.

5 *Review what you missed*

Go back to the problems you got wrong. Read the topic explanation, study the method, then try the quiz again in a few days. Your score should improve every time.

Track Your Scores

Every quiz in this book has a **Name / Date / Score** bar at the top. After you finish a quiz, check your answers using the answer key in the back, then write your score on that bar.

★ How to Track Your Progress

- 1 Write your score on the quiz page right after you grade it.
- 2 Circle any quiz where you scored below 70 %.
- 3 Review the topic, then retake the quiz in a few days.
- 4 Compare your scores — you'll see improvement every time!

💡 *Tip: Your score should go up every time you retake a quiz. That's how you know you're learning!*

✎ Use the score bar on each quiz page to record your results.

Take Your Learning Online with ViewMath Academy!

For Parents, Teachers & Students

Love what you're reading? ViewMath Academy is your **free online companion** to this book — practice what you learn, track your progress, and master every topic!

-  **Topic Quizzes** — Test yourself on each topic right after you study it in this book
-  **Interactive Lessons** — Revisit any concept with online lessons that match each chapter
-  **Progress Tracking** — Watch your mastery grow as you work through the book
-  **Adaptive Practice** — Get more questions on topics where you need extra help
-  **Practice Tests** — When you're ready, take a full practice test and analyze your score online



Scan to visit ViewMath Academy

 [ViewMath.com/MN-Algebra1](https://www.viewmath.com/MN-Algebra1)

 Free to use • No downloads required • Works on any device



CHAPTER

1

Foundations of Algebra

★ What's Inside ★

1.1 Classifying Real Numbers	2
------------------------------------	---



★ 1.1 Classifying Real Numbers ★

🎯 Learning Goals

- Classify numbers into all applicable real number subsets
- Describe how the number subsets nest inside each other

🎓 The Real Number Subsets

Every number belongs to one or more subsets of the **real numbers**:

- **Natural numbers:** $1, 2, 3, \dots$ (counting numbers)
- **Whole numbers:** $0, 1, 2, 3, \dots$ (naturals plus zero)
- **Integers:** $\dots, -2, -1, 0, 1, 2, \dots$ (whole numbers and negatives)
- **Rational numbers:** any $\frac{a}{b}$ where a, b are integers and $b \neq 0$
- **Irrational numbers:** decimals that never end and never repeat ($\sqrt{2}, \pi$)

These sets nest like rings in a **Venn diagram**:

Natural \subset Whole \subset Integer \subset Rational \subset **Real**

Irrational numbers sit beside Rational, inside Real. Every real number is either rational **or** irrational—never both.

✏️ Classify Into All Subsets

Place each number in **every** subset that applies.

1. 7: Natural, Whole, Integer, Rational, Real
2. 0: Whole, Integer, Rational ($\frac{0}{1}$), Real
3. -3 : Integer, Rational ($-\frac{3}{1}$), Real
4. $\frac{2}{3} = 0.\bar{6}$: Rational (repeats), Real
5. $0.75 = \frac{3}{4}$: Rational (terminates), Real



Get Online



Find more at
[ViewMath.com/MN-Algebra1](https://www.viewmath.com/MN-Algebra1)



6. $\pi = 3.14159\dots$: Irrational, Real

7. $\sqrt{3} = 1.732\dots$: Irrational, Real

Rational Numbers

- Written as $\frac{a}{b}$, $b \neq 0$
- Decimals terminate or repeat
- Examples: $\frac{3}{4}$, -2 , $0.\bar{6}$

Irrational Numbers

- Cannot be written as $\frac{a}{b}$
- Decimals never terminate or repeat
- Examples: $\sqrt{2}$, π , $\sqrt{10}$



“ Every integer is rational! Write it over 1: $-5 = \frac{-5}{1}$, $0 = \frac{0}{1}$. ”

Classifying Real Numbers

1. Classify -7 into all applicable subsets.
2. Classify $\sqrt{3}$ into all applicable subsets.
3. Classify 0.75 into all applicable subsets.
4. List all subsets for $\sqrt{25}$.
5. Every whole number is also a rational number.

True False



Find more at
[ViewMath.com/MN-Algebra1](https://www.viewmath.com/MN-Algebra1)



CHAPTER

2

Introduction to Functions

★ *What's Inside* ★

<i>2.1 What Is a Function?</i>	5
--------------------------------------	---



★ 2.1 What Is a Function? ★

🎯 Learning Goals

- Decide whether a relation is a function
- Use the vertical line test on graphs

🎓 What Is a Function?

A **relation** is any set of ordered pairs (x, y) .

A **function** is a special relation where every input (x) gives exactly one output (y) . No x -value may repeat with a different y -value.

Think of a vending machine. Press button **A3**, you always get the same snack. If one button gave a random item each time, that machine would not be a function!

Ways to show a relation: ordered pairs, table, graph, mapping diagram, or equation.

✏️ Checking a Table

Is this relation a function?

x	1	2	3	1
y	5	8	10	7

The input $x = 1$ maps to both 5 and 7. One input gives two outputs, so this is **not a function**.



Get Online

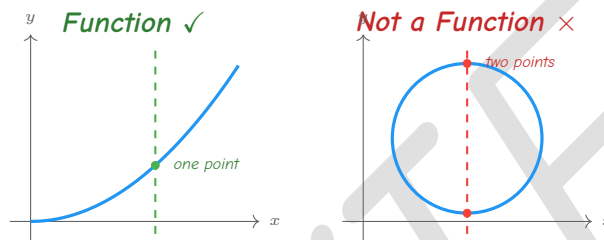


Find more at
[ViewMath.com/MN-Algebra1](https://www.viewmath.com/MN-Algebra1)



The Vertical Line Test

- 1 Draw or look at the graph of the relation.
- 2 Imagine sliding a vertical line across the graph from left to right.
- 3 If the vertical line ever hits the graph in **two or more points** at the same time, it is **not** a function.
- 4 If every vertical line hits at most one point, it **is** a function.



“ A function is like a rule: one question, one answer. If one input gives two answers, it breaks the rule! ”



TIP

In a mapping diagram, each input arrow must point to exactly one output. An input with two arrows means it is not a function.

What Is a Function?

1. A relation has the pairs $(2, 4)$, $(3, 6)$, $(4, 8)$, $(5, 10)$. Is it a function?
2. A relation has the pairs $(1, 3)$, $(2, 5)$, $(1, 7)$. Is it a function?
3. A circle is drawn on a coordinate plane. Does it pass the vertical line test?
4. Every function is a relation. True False
5. A mapping diagram shows $3 \rightarrow 9$, $4 \rightarrow 16$, $5 \rightarrow 25$. Is it a function?



Get Online



Find more at
ViewMath.com/MN-Algebra1



 ViewMath.com

Answer Key & Explanations



Answer Key

First try each quiz on your own, then check your work here.

0 Integer, Rational, Real

0 Irrational, Real

0 Rational, Real

0 Nat, Whole, Int, Rat, Real

0 True

0 Yes

0 No

0 No

0 True

0 Yes

Explanations

0 -7 is negative, so not natural or whole. It is an integer. Since $-7 = \frac{-7}{1}$, it is also rational.

0 3 is not a perfect square. $\sqrt{3}$ is a non-repeating, non-terminating decimal—irrational and real.

0 $0.75 = \frac{3}{4}$, a terminating decimal. Rational and real, but not an integer.

0 $\sqrt{25} = 5$. Since 5 is a counting number, it belongs to every subset except irrational.

0 Each input appears only once. Every x -value maps to exactly one y -value, so it is a function.

0 The input $x = 1$ maps to both 3 and 7 . One input gives two outputs, so it is not a function.

0 A vertical line through the middle of a circle hits it at two points. So a circle is not a function.

0 Each input maps to exactly one output. No input is repeated, so it is a function.



Get Online



Find more at
[ViewMath.com/MN-Algebra1](https://www.viewmath.com/MN-Algebra1)





Well done checking your answers!

Keep practicing to strengthen your skills.

PREVIEW



Get Online

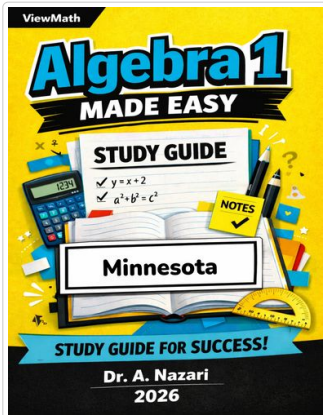


Find more at
[ViewMath.com/MN-Algebra1](https://www.viewmath.com/MN-Algebra1)



Great Job! Keep Learning with ViewMath!

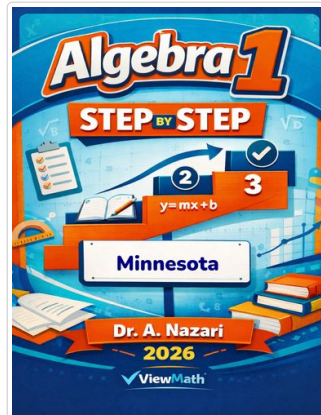
Keep up the great work! Visit viewmath.com/MN-Algebra1 for free lessons, quizzes, and more.



Study Guide



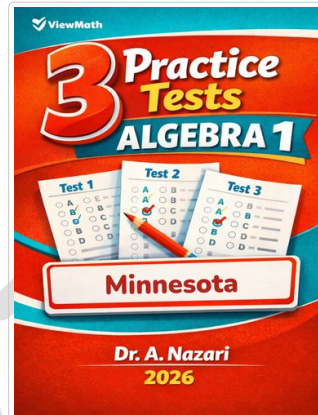
Scan Me



Step-by-Step



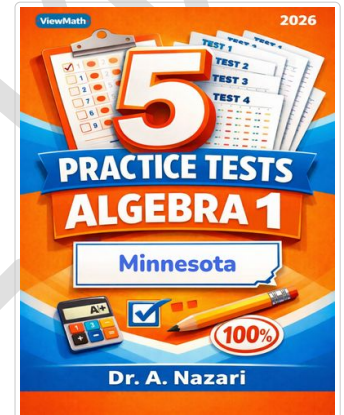
Scan Me



3 Practice Tests



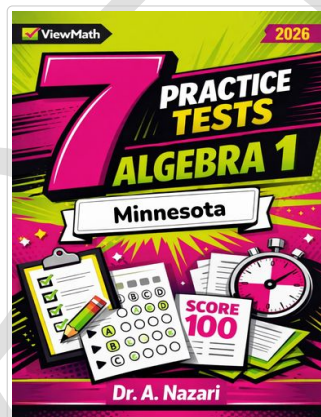
Scan Me



5 Practice Tests



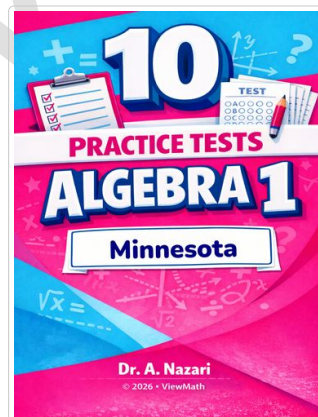
Scan Me



7 Practice Tests



Scan Me



10 Practice Tests



Scan Me



Get Online



Find more at
[ViewMath.com/MN-Algebra1](https://viewmath.com/MN-Algebra1)



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*

 Visit us at [ViewMath.com](https://www.viewmath.com) for free resources and more books!