Kentucky Algebra 2 Quizzes

Quick Topic Assessments with Answer Key

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QUICK CHECKS FOR ALGEBRA 2 FOUNDATIONS

Algebra 2 Math Quizzes

Chapter 1 Topic Assessments • Fast Scoring • Answer Key

These short quizzes help students check the exact Algebra 2 foundation skill they just studied: real numbers, expression structure, equations, inequalities, formulas, and absolute value.

Each quiz is focused enough for class warm-ups, exit tickets, tutoring sessions, homework checks, or fast test-prep review.

One Skill
each quiz stays topic focused

10-15 Min
easy to fit into a lesson block

Answer Key
answers with quick explanations

How to Use This Quiz Pack

A simple routine

1. ***Pick the matching topic.*** *Use the table of contents to choose the quiz that matches the lesson.*

2. ***Give students one clean attempt.*** *Most quizzes work well as 10-15 minute checks.*

3. ***Score quickly.*** *Use the answer key to mark each item and note the score at the top of the quiz.*

4. ***Reteach the pattern, not just the problem.*** *Wrong signs, wrong interval end-points, and missed distribution usually point to the next mini-lesson.*

Flexible classroom uses

Exit Ticket	Small Group	Retake Tool
one topic check	targeted practice	show growth after review

Short quizzes make progress visible without taking over the whole period.

Chapter 1 Quiz Tracker

Use this page to spot which foundation skills are ready and which ones need a short review before students move deeper into Algebra 2.

Quiz	Topic	Score	Retake
1	Real Number System and Set Notation		
2	Properties and Order of Operations		
3	Integer Exponents and Scientific Notation		
4	Evaluating Algebraic Expressions		
5	Simplifying Algebraic Expressions		
6	Solving Linear Equations		
7	Literal Equations and Formulas		
8	Linear Inequalities		
9	Compound Inequalities and Interval Notation		
10	Absolute Value Equations		
11	Absolute Value Inequalities		

Quick scoring guide

80-100%	*Ready for mixed practice or the next topic.*
60-79%	*Review the missed question type, then retake.*
Below 60%	*Reteach the skill in a small group before moving on.*

PRACTICE & TRACK

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*

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

CHAPTER

1

Algebra 2 Foundations

What's Inside

QUIZ 1

CHAPTER 1

Real Number System and Set Notation

Name: _____ Date: _____ Score: ____ / 8

1 Which number is irrational?

A. $\sqrt{64}$

B. $0.\overline{18}$

C. $\sqrt{45}$

D. $-\frac{13}{5}$

2 What is the most precise classification of $\sqrt{81}$?

A. natural number

B. integer but not whole

C. rational but not integer

D. irrational number

3 Write $\{x \mid -2 \leq x < 5\}$ in interval notation.

Interval notation: _____

4 Which interval represents all real numbers less than or equal to 3?

A. $(-\infty, 3]$

B. $(-\infty, 3)$

C. $[3, \infty)$

D. $(3, \infty)$

5 True or False: Every integer is a rational number.

◯ True ◯ False

6 Which statement describes $(-\infty, -1) \cup (4, \infty)$?

A. $x < -1$ and $x > 4$

B. $x < -1$ or $x > 4$

C. $-1 < x < 4$

D. $-1 \leq x \leq 4$

7 Use the number line. What interval is shown?

A. $[-3, 2]$

B. $(-3, 2]$

C. $[-3, 2)$

D. $(-\infty, -3) \cup (2, \infty)$

8 *A student says* $0.272727\ldots$ *is irrational because it never ends. What is the error?*

Error: _____

CHAPTER

3

Functions, Transformations, and Inverses

What's Inside

QUIZ 2

CHAPTER 3

Function Notation and Evaluation

Name: _____ Date: _____ Score: ____/ 8

1 *If* $f(x) = x^2 - 3x + 1$, *find* $f(-2)$.

A. -9

B. -1

C. 11

D. 3

2 *If* $g(x) = 2x - 5$, *find* $g(a + 1)$.

Expression: _____

3 *Use the table to find* $h(4)$.

x	-2	0	4	7
$h(x)$	9	3	-5	1

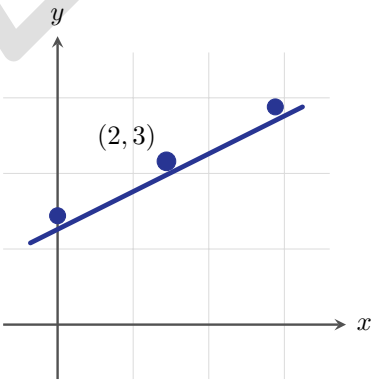
A. 4

B. -5

C. 7

D. 1

4 *Use the graph. What is* $p(2)$*?*



A. 2

B. 3

C. 4

D. 5

5 *The height of a candle after t minutes is $H(t) = 18 - 0.4t$ centimeters. What is $H(20)$?*

A. 10 *cm*

B. 18 *cm*

C. 20 *cm*

D. 26 *cm*

6 *Which statement correctly interprets $f(6) = 14$?*

A. The input is 14 when the output is 6.

B. The output is 14 when the input is 6.

C. f is multiplied by 6 to get 14.

D. The slope is $14 - 6$.

7 *If $q(x) = 4x + 7$, what input makes $q(x) = 31$?*

Input: _____

8 *A student evaluates $f(-3) = 2x^2 + 1$ as $2(-3)^2 + 1 = -17$. What is the error?*

Error: _____

Answer Key & Explanations

Answer Key

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

Chapter 1

Quiz 1 Answer Key Real Number System and Set Notation

1. C ($\sqrt{45}$)
2. A (natural number)
3. $[-2, 5)$
4. A ($(-\infty, 3]$)
5. True
6. B ($x < -1$ or $x > 4$)
7. B ($(-3, 2]$)
8. It repeats, so it is rational.

Quiz 1 Explanations Real Number System and Set Notation

1. Check whether each number can be written as a ratio of integers. $\sqrt{64} = 8$, $0.\overline{18}$ repeats, and $-\frac{13}{5}$ is rational, but $\sqrt{45}$ is irrational because 45 is not a perfect square.

2. First simplify the radical: $\sqrt{81} = 9$. Since 9 is a counting number, the most precise listed set is natural number, even though it is also whole, integer, and rational.

3. Translate each inequality symbol into endpoint notation. The symbol $\leq$ includes -2, so use a bracket there, while $<$ excludes 5, so use a parenthesis on the right.

4. Numbers less than 3 extend left forever, so the interval begins at $-\infty$. The phrase "or equal to" includes 3, so the finite endpoint must use a bracket.

5 *A rational number is any number that can be written as a quotient of integers. Every integer n can be written as $\frac{n}{1}$, so every integer is rational.*

6 *The union symbol means values can come from either interval, not both at once. The graph would have one ray left of -1 and another ray right of 4, so the statement uses "or."*

7 *Read the endpoints directly from the number line. The open circle at -3 means -3 is not included, while the closed circle at 2 means 2 is included.*

8 *A nonterminating decimal is rational when it has a repeating block. Here the block 27 repeats forever, so the decimal can be written as a fraction and is not irrational.*

Chapter 3

Quiz 2 Answer Key Function Notation and Evaluation

1 C (11)

2 $2a - 3$

3 B (-5)

4 B (3)

5 A (10 cm)

6 B (The output is 14 when the input is 6.)

7 6

8 The square of -3 is positive.

Quiz 2 Explanations *Function Notation and Evaluation*

1. *Substitute -2 for every x using parentheses. Then $f(-2) = (-2)^2 - 3(-2) + 1 = 4 + 6 + 1 = 11$.*

2. *Replace x with the entire input $a + 1$. Then $g(a + 1) = 2(a + 1) - 5 = 2a + 2 - 5 = 2a - 3$.*

3. *The notation $h(4)$ asks for the output when the input is 4. In the table, the entry under $x = 4$ is -5.*

4. *The value $p(2)$ is the y-value on the graph when $x = 2$. The marked point $(2, 3)$ shows that $p(2) = 3$.*

5. *Substitute 20 for t: $H(20) = 18 - 0.4(20) = 18 - 8 = 10$. The output is a height, so the unit is centimeters.*

6. *Function notation names an input-output pair. The expression $f(6) = 14$ means the function value, or output, is 14 for input 6.*

7. *Set the output equal to 31: $4x + 7 = 31$. Subtract 7 to get $4x = 24$, then divide by 4 to get $x = 6$.*

8. *The input must be squared before multiplying by 2. Since $(-3)^2 = 9$, the correct value is $2(9)+1 = 19$, not -17.*

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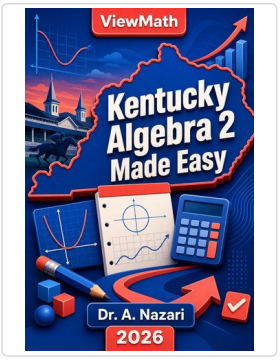

Study Guide

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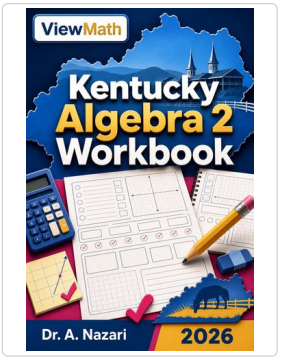

Workbook

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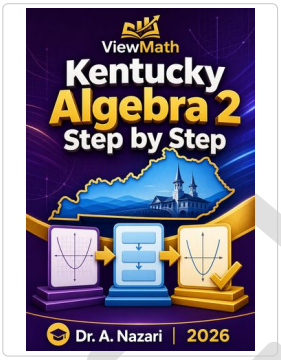

Step-by-Step

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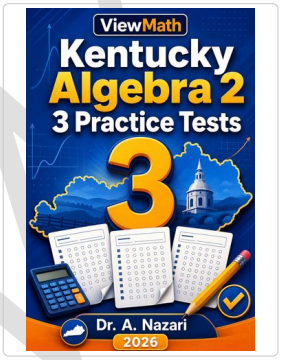

3 Practice Tests

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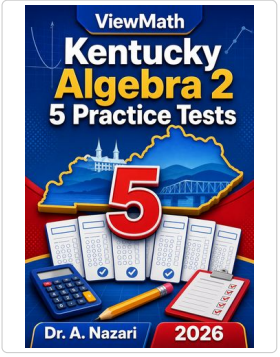

5 Practice Tests

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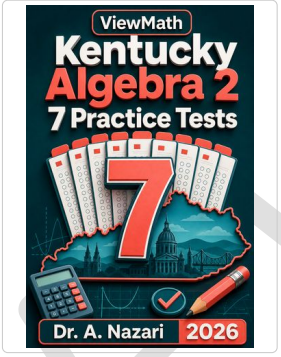

7 Practice Tests

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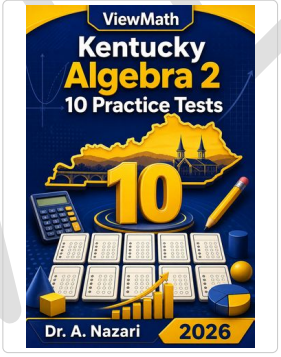

10 Practice Tests

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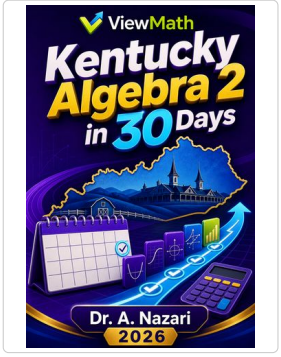

Math in 30 Days

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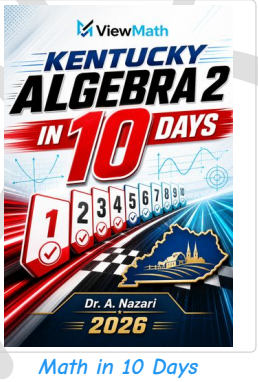

Math in 10 Days

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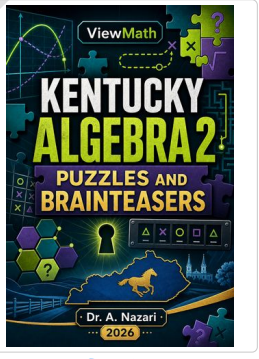

Puzzles

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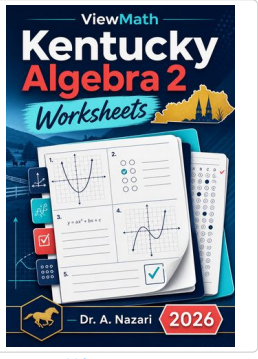

Worksheets

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