A COMPLETE ALGEBRA 2 REVIEW PLAN

# Algebra 2<br>Math in 30 Days

One focused lesson a day • Daily practice • Answer explanations

30 focused sessions: foundations and linear review through state-aligned functions, equations, statistics, probability, modeling, and finance.

### Learn

Compressed lessons

with the must-know moves

### Practice

Mixed problems

with clear answer support

### Finish

Track every day

and see momentum build

**Best for:** end-of-course review, summer bridge work, tutoring, home study, and students who need a clean month-long study plan.

# Your 30-Day Algebra 2 Plan

A complete course review, paced into short daily sessions.

**How the plan works:** The plan follows the state-aligned lesson sequence below. Work one focused day at a time, then use the answer explanations to repair missed steps before moving to the next day.

# Progress Tracker

Color each box, check each lesson, and keep the momentum visible.

## My 30-Day Progress

| | | | | |
|---|---|---|---|---|
| Day 1 ☐ | Day 2 ☐ | Day 3 ☐ | Day 4 ☐ | Day 5 ☐ |
| Day 6 ☐ | Day 7 ☐ | Day 8 ☐ | Day 9 ☐ | Day 10 ☐ |
| Day 11 ☐ | Day 12 ☐ | Day 13 ☐ | Day 14 ☐ | Day 15 ☐ |
| Day 16 ☐ | Day 17 ☐ | Day 18 ☐ | Day 19 ☐ | Day 20 ☐ |
| Day 21 ☐ | Day 22 ☐ | Day 23 ☐ | Day 24 ☐ | Day 25 ☐ |
| Day 26 ☐ | Day 27 ☐ | Day 28 ☐ | Day 29 ☐ | Day 30 ☐ |

☑ = Done     Check off each day as you complete it.

## Three checkpoints

### Start

Rebuild foundations, equations, and function language.

### Middle

Organize major function families and solving methods.

### Day 30

The whole Algebra 2 course has been reviewed with practice and answers.

Aim for 30–45 minutes per day. Small sessions beat last-minute cramming.

# How to Use This Book

Same daily routine. Less decision fatigue. Better review.

1

## Start with the day page

Read the goals before you work. The day page tells you which Algebra 2 moves matter most and how far you are through the plan.

2

## Study the quick lesson

Focus on the rule, the worked example, and the common trap. The goal is not to memorize a chapter; it is to make the next problem feel familiar.

3

## Do the daily practice

Write the steps, not just answers. Check the explanation after each item and circle anything you want to review tomorrow.

4

## Finish the challenge

The challenge question mixes ideas. If it feels hard, that is useful feedback: use the answer explanation as a mini-lesson.

**Daily time target:** 30–45 minutes. If a day takes longer, split it into lesson now and practice later.

**Teacher tip:** Use each day as one tutoring session, one homework review, or one short test-prep lesson leading into an Algebra 2 final or state assessment.

# Arkansas Algebra 2 in 30 Days

*Day-by-Day Study Plan with Practice and Answer Explanations*

**Dr. A. Nazari**



Published by View Math Education
ViewMath.com

DAY

# Real Numbers, Properties, and Expressions

## Today You Will Learn

**Topics covered today:**

- Real Number System and Set Notation
- Properties of Operations and Order of Operations
- Integer Exponents and Scientific Notation
- Evaluating Algebraic Expressions
- Simplifying Algebraic Expressions

**Your Progress:** Day of 30 — **3% Complete**

Ready to begin? →

About 60 minutes

## Real Number System and Set Notation

*The real number system organizes every number on the number line. Some sets sit inside larger sets, so one number can have several correct names. When a question asks for the most precise set, give the smallest accurate category.*

**Number Sets and Interval Notation**

*A rational number can be written as a ratio of integers, so its decimal terminates or repeats. An irrational number is real, but its decimal never terminates and never repeats. Use interval notation for whole sets of values: brackets include endpoints, parentheses exclude endpoints, and infinity always uses a parenthesis.*

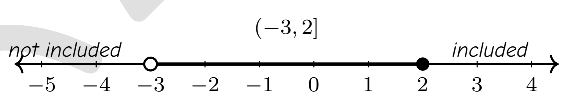
***In math language:*** *the symbol ⊂ means "is contained in."*

*natural ⊂ whole ⊂ integers ⊂ rational ⊂ real*

*Set notation is just a compact way to describe a group of numbers. The vertical bar in* $\{x \mid x > -2\}$ *means "such that," so the phrase reads "all real numbers* $x$ *such that* $x$ *is greater than* $-2$*." On a number line, open endpoints match parentheses and closed endpoints match brackets.*

**Common Notation Choices**

| | |
|---|---|
| $x < 5$ | *Values less than* $5$*: interval* $(-\infty, 5)$. |
| $x \geq -1$ | *Values at least* $-1$*: interval* $[-1, \infty)$. |
| $-3 < x \leq 4$ | *Values between endpoints: interval* $(-3, 4]$. |
| $x < -2$ **or** $x > 6$ | *Two separated pieces: interval* $(-\infty, -2) \cup (6, \infty)$. |




### Example

Classify $-\sqrt{49}$ as precisely as possible, then write $\{x \mid -4 \leq x < 3\}$ in interval notation.

$$-\sqrt{49} = -7$$

*The number* $-7$ *is an integer, so it is also rational and real. It is not whole or natural because it is negative. The set* $\{x \mid -4 \leq x < 3\}$ *becomes* $[-4, 3)$*: the bracket keeps* $-4$*, and the parenthesis leaves out* $3$*.*

**Answer:** $-7$ *is an integer; the interval is* $[-4, 3)$.

## Properties of Operations and Order of Operations

*Algebra depends on two kinds of control: knowing which operation happens first, and knowing which rewrites keep the value unchanged. Order of operations controls the first part; properties justify the second.*

### Key Points to Remember

| | |
|---|---|
| ***Order of operations*** | *Grouping symbols, exponents, multiplication/division left to right, then addition/subtraction left to right.* |
| ***Commutative*** | *Addition or multiplication can change order.* $a + b = b + a$, $ab = ba$. |
| ***Associative*** | *Addition or multiplication can regroup:* $(a + b) + c = a + (b + c)$. |
| ***Distributive*** | *A factor outside parentheses multiplies every term inside:* $a(b + c) = ab + ac$. |
| ***Identity and inverse*** | $a + 0 = a$, $a \cdot 1 = a$; *inverses undo operations, such as* $a + (-a) = 0$. |

*A property is a reason a rewrite is valid. For example,* $7 + 0 = 7$ *uses the additive identity, while* $7 + (-7) = 0$ *uses an additive inverse. In equation solving, every step should preserve equality: doing the same operation to both sides keeps the balance true.*

### Example

Evaluate $20 - 2(3^2 + 1) \div 5$ and name the order rule being used.

$$20 - 2(3^2 + 1) \div 5 = 20 - 2(10) \div 5 = 20 - 20 \div 5 = 16.$$

*The key is that multiplication and division share the same priority, so they are done from left to right after grouping and exponents.*

**Answer:** $16$

**Example**

Use properties to rewrite $5(2x-3)+4x$, then identify the main property.

$$5(2x-3)+4x = 10x-15+4x = 14x-15.$$

*The first rewrite uses the distributive property. The final rewrite combines like terms, which is allowed because $10x$ and $4x$ have the same variable part.*

**Answer:** $14x-15$; *distributive property*

## *Integer Exponents and Scientific Notation*

*Exponent rules are shortcuts for counting repeated factors accurately. Use product, quotient, and power rules only when the base is the same. A negative exponent means reciprocal; it does not make the value negative.*

$$a^m a^n = a^{m+n}, \qquad \frac{a^m}{a^n} = a^{m-n}, \qquad (a^m)^n = a^{mn}, \qquad a^{-n} = \frac{1}{a^n}.$$

*Exponent Rules Students Often Miss*

| | |
|---|---|
| ***Zero exponent*** | *If $a \neq 0$, then $a^0 = 1$. For example, $7^0 = 1$.* |
| ***Power of a product*** | $(ab)^n = a^n b^n$, *so* $(3x)^2 = 9x^2$. |
| ***Power of a quotient*** | $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$ *when* $b \neq 0$. |
| ***Negative exponent*** | *Move the factor across the fraction bar.* $x^{-4} = \frac{1}{x^4}$. |

*Scientific notation separates significant digits from place value. It has the form $c \times 10^n$, where $1 \leq |c| < 10$. Large numbers use positive powers of $10$, and small numbers use negative powers of $10$.*

**Example**

Simplify $\frac{(4x^{-2}y^5)(3x^4y^{-1})}{6xy}$ with positive exponents, then write $0.00093$ in scientific notation.

$$\frac{(4x^{-2}y^5)(3x^4y^{-1})}{6xy} = \frac{12x^2y^4}{6xy} = 2xy^3.$$

*For $0.00093$, move the decimal $4$ places right to make $9.3$, so $0.00093 = 9.3 \times 10^{-4}$.*

**Answer:** $2xy^3$; $9.3 \times 10^{-4}$

*When comparing numbers in scientific notation, first compare powers of $10$ if the coefficients are between $1$ and $10$. If the powers match, compare the coefficients. This keeps very large and very small quantities from turning into long decimal strings.*

## *Evaluating Algebraic Expressions*

*To evaluate an expression, replace each variable with the given value and then simplify. Put substituted negative numbers in parentheses, especially when exponents are involved.*

**Example**

Evaluate $3a^2 - 2b + 5$ when $a = -2$ and $b = 7$.

$$3(-2)^2 - 2(7) + 5 = 3(4) - 14 + 5 = 3.$$

*Parentheses protect the negative input, so $(-2)^2$ becomes positive 4.*

**Answer:** 3

*Evaluating Without Sign Errors*

1. ***Substitute with parentheses:*** *write negative inputs as grouped numbers, such as $(-3)^2$.*
2. ***Keep the operation order:*** *exponents happen before multiplication unless grouping says otherwise.*
3. ***Track units in formulas:*** *the variable value should match the meaning and units in the expression.*

**Example**

Evaluate $2x^2 - xy$ when $x = -3$ and $y = 4$.

$$2(-3)^2 - (-3)(4) = 2(9) + 12 = 30.$$

*The subtraction of a negative product becomes addition, so the sign matters as much as the arithmetic.*

**Answer:** 30

## *Simplifying Algebraic Expressions*

*Simplifying means writing an equivalent expression in a cleaner form. Distribute before combining like terms, and combine only terms with exactly the same variable part, including exponents.*

*Terms are separated by addition or subtraction after the expression is fully distributed. Coefficients can combine only when the variable part matches exactly: $3x^2$ and $5x^2$ are like terms, but $3x^2$ and $5x$ are not.*

**Example**

Simplify $3(2p - 1) - 4(p + 5)$.

$$3(2p - 1) - 4(p + 5) = 6p - 3 - 4p - 20 = 2p - 23.$$

*Both parentheses must be distributed before like terms can be combined.*

**Answer:** $2p - 23$

## Example

Simplify $4x(2x - 3) + 5x^2$.

$$4x(2x - 3) + 5x^2 = 8x^2 - 12x + 5x^2 = 13x^2 - 12x.$$

*The product $4x \cdot 2x$ creates $8x^2$, so it cannot combine with the linear term $-12x$.*

**Answer:** $13x^2 - 12x$

## Day Practices

*Real Number System and Set Notation*

1. *Classify $\sqrt{64}$ as precisely as possible.*
2. *Decide whether $0.3131131113\ldots$ is rational or irrational.*
3. *Write $\{x \mid x \leq 4\}$ in interval notation.*
4. *Write $\{x \mid -3 < x \leq 2\}$ in interval notation.*

*Properties of Operations and Order of Operations*

5. *Evaluate $5 + 2(9 - 4)^2$.*
6. *Simplify $24 \div 6 \cdot 3$.*
7. *Name the property: $4(x + 7) = 4x + 28$.*

*Integer Exponents and Scientific Notation*

8. *Simplify $x^8x^{-5}$.*
9. *Simplify $\frac{p^6q^2}{p^2q^5}$ with positive exponents.*
10. *Write $0.00093$ in scientific notation.*

*Evaluating Algebraic Expressions*

11. *Evaluate $m^2 + 3m$ when $m = -5$.*
12. *In $8t + 12$, identify the coefficient and the constant.*
13. *A ride cost is $2.50m + 6$, where $m$ is miles. Find the cost for $m = 8$.*

*Simplifying Algebraic Expressions*

**14.** *Simplify* $-2(y-8)+5y$.

**15.** *Simplify* $5-(2x-9)$.

**16.** *Which term is like* $6m^2n$*:* $3mn^2$, $-m^2n$, $6mn$, *or* $m^3n$*?*

DAY

# Equations, Inequalities, and Absolute Value

## Today You Will Learn

**Topics covered today:**

- Solving Linear Equations
- Literal Equations and Formulas
- Linear Inequalities
- Compound Inequalities and Interval Notation
- Absolute Value Equations
- Absolute Value Inequalities

**Your Progress:** Day of 30 — **7% Complete**

Ready to begin? →

*About 65 minutes*

## *Solving Linear Equations*

*An equation is a balance statement. Solving means finding every value of the variable that makes both sides equal. A useful order is simplify each side, collect variable terms, collect constants, then divide by the coefficient.*

### *Steps for Solving Linear Equations*

1. ***Simplify:*** *distribute and combine like terms on each side.*
2. ***Collect variables:*** *move variable terms to one side of the equation.*
3. ***Collect constants:*** *move constant terms to the other side.*
4. ***Divide:*** *divide by the coefficient of the variable.*
5. ***Read special cases:*** *a true final statement means infinitely many solutions; a false final statement means no solution.*

### Example

Solve $3(2x-1)=4x+11$.

$$6x-3=4x+11, \qquad 2x=14, \qquad x=7.$$

*Distribute first, then gather variables and constants so one division isolates $x$.*

**Answer:** $x=7$

*Equations with fractions are often easier after clearing denominators. Multiply every term on both sides by the least common denominator, then solve the resulting linear equation. This is not an approximation; it is the multiplication property of equality.*

### Example

Solve $\frac{x}{3}+\frac{x-1}{2}=5$.

*The least common denominator is $6$, so multiply every term by $6$:*

$$6\left(\frac{x}{3}\right)+6\left(\frac{x-1}{2}\right)=6(5),$$

$$2x+3(x-1)=30, \qquad 5x-3=30, \qquad x=\frac{33}{5}.$$

**Answer:** $x=\frac{33}{5}$

## Literal Equations and Formulas

*A literal equation has more than one variable. Instead of finding a number, rewrite the formula so the requested variable is alone. Treat every other letter like a known quantity.*

**Rearranging Formulas**

1. ***Locate the target:*** *circle the variable the question says to solve for.*
2. ***Undo outside operations:*** *clear fractions, roots, or grouped factors that affect the target.*
3. ***Factor if needed:*** *if the target appears in more than one term, factor it out before dividing.*
4. ***Check meaning:*** *the final formula should have the target variable alone on one side.*

**Example**

Solve $A = P + Prt$ for $P$.

*The target variable appears in two terms, so factor it before dividing:*

$$A = P + Prt = P(1 + rt), \qquad P = \frac{A}{1 + rt}.$$

*This is the same structure as combining like terms in reverse.*

**Answer:** $P = \frac{A}{1+rt}$

**Example**

Solve $C = \frac{5}{9}(F - 32)$ for $F$.

*First undo the multiplication by $\frac{5}{9}$ by multiplying both sides by $\frac{9}{5}$:*

$$\frac{9}{5}C = F - 32, \qquad F = \frac{9}{5}C + 32.$$

**Answer:** $F = \frac{9}{5}C + 32$

## Linear Inequalities

*A one-variable inequality usually has a whole interval of solutions. Solve it like an equation, except multiplication or division by a negative number reverses the inequality symbol.*

**Example**

Solve $7 - 3x < 19$ and write interval notation.

$$-3x < 12, \qquad x > -4.$$

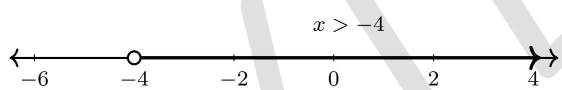
*The inequality reverses when dividing by $-3$. The endpoint is not included, so the solution is $(-4, \infty)$.*

**Answer:** $(-4, \infty)$

*Interval notation and inequality notation tell the same story in different languages. A bracket means the endpoint is allowed. A parenthesis means the endpoint is a boundary but not part of the solution. Always use a parenthesis with $\infty$ or $-\infty$ because infinity is not an endpoint you can include.*

### *Inequality Symbols and Intervals*

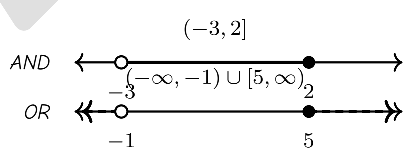
| *Symbol* | *Endpoint* | *Example interval* |
|---|---|---|
| $<$ *or* $>$ | *Open circle* | $x < 4$ *becomes* $(-\infty, 4)$. |
| $\leq$ *or* $\geq$ | *Closed circle* | $x \geq -2$ *becomes* $[-2, \infty)$. |
| *AND* | *Overlap* | $-1 < x \leq 5$ *becomes* $(-1, 5]$. |
| *OR* | *Union* | $x < -1$ *or* $x \geq 5$ *becomes* $(-\infty, -1) \cup [5, \infty)$. |




## *Compound Inequalities and Interval Notation*

*A compound inequality combines two conditions. AND means overlap, so the answer is usually one middle interval. OR means union, so separated intervals are joined with $\cup$.*

*For a three-part inequality such as $-2 \leq 3x + 1 < 10$, work on all three parts at the same time. Whatever you add, subtract, multiply, or divide must happen to the left, middle, and right expressions. If you divide all three parts by a negative number, both inequality symbols reverse.*




### Example

Solve $-4 < 2x + 6 \leq 14$.

*Do the same operation to all three parts:*

$$-10 < 2x \leq 8, \qquad -5 < x \leq 4.$$

*This is an AND statement, so the answer is the single interval $(-5, 4]$.*

**Answer:** $(-5, 4]$

**Example**

Solve $2x - 1 < -7$ or $3x + 4 \geq 13$.

*Solve each part separately because OR means either condition can work:*

$$2x < -6 \Rightarrow x < -3, \qquad 3x \geq 9 \Rightarrow x \geq 3.$$

*The solution is* $(-\infty, -3) \cup [3, \infty)$.

**Answer:** $(-\infty, -3) \cup [3, \infty)$

## Absolute Value Equations

*Absolute value measures distance. Since a point can be the same distance to the right or left of a center, most absolute value equations split into two equations after the absolute value is isolated.*

*The absolute value expression must be isolated before you split into cases. If* $2|x-1| + 3 = 11$*, subtract* $3$ *and divide by* $2$ *first. Only then does* $|x-1| = 4$ *become* $x - 1 = 4$ *or* $x - 1 = -4$.

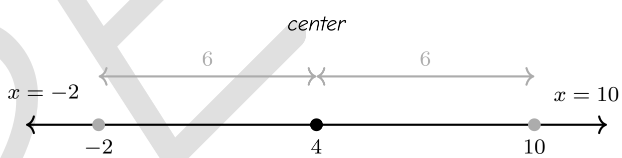
**Absolute Value Equation Rules**

*The expression* $|x-4|$ *means the distance from* $x$ *to* $4$*. If that distance is* $6$*, then* $x$ *can be* $6$ *units to the right of* $4$ *or* $6$ *units to the left of* $4$.

***In math language:***

$$|A| = k \Rightarrow A = k \text{ or } A = -k.$$

*If an isolated absolute value equals a negative number, there is no solution.*




**Example**

Solve $3|x + 2| = 15$.

*Divide by* $3$ *before splitting:*

$$|x + 2| = 5, \qquad x + 2 = 5 \text{ or } x + 2 = -5.$$

*So* $x = 3$ *or* $x = -7$.

**Answer:** $x = 3$ or $x = -7$

### Example

Solve $2|x-1|+3=11$.

$$2|x-1|=8, \qquad |x-1|=4.$$

*Now split:*

$$x-1=4 \text{ or } x-1=-4,$$

*so* $x=5$ *or* $x=-3$.

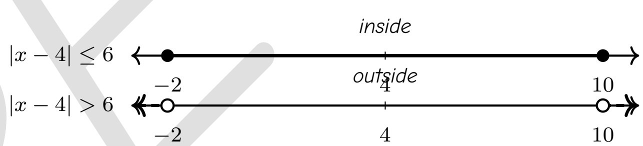
**Answer:** $x=5$ or $x=-3$

## *Absolute Value Inequalities*

*Absolute value inequalities describe distances that are small enough or large enough. Less-than inequalities stay between boundary points. Greater-than inequalities go outside the boundary points.*

*Absolute Value Inequality Patterns*

| Pattern | Meaning | Rewrite |
|---|---|---|
| $\lvert A\rvert < k$ | distance less than $k$ | $-k < A < k$ |
| $\lvert A\rvert \leq k$ | distance at most $k$ | $-k \leq A \leq k$ |
| $\lvert A\rvert > k$ | distance greater than $k$ | $A < -k$ or $A > k$ |
| $\lvert A\rvert \geq k$ | distance at least $k$ | $A \leq -k$ or $A \geq k$ |




### Example

Solve $|2x+1|>7$.
*Greater-than means outside:*

$$2x+1<-7 \text{ or } 2x+1>7.$$
$$x<-4 \text{ or } x>3.$$

*In interval notation, the solution is* $(-\infty,-4)\cup(3,\infty)$.

**Answer:** $(-\infty,-4)\cup(3,\infty)$

## Day Practices

### Solving Linear Equations

**1.** *Solve* $4x - 7 = 21$.

**2.** *Solve* $7x + 4 = 3x + 28$.

**3.** *Solve* $5(x - 2) = 5x + 3$.

**4.** *What type of solution occurs if solving an equation gives* $0 = 0$?

### Literal Equations and Formulas

**5.** *Solve* $A = \frac{1}{2}bh$ *for* $h$.

**6.** *Solve* $P = 2l + 2w$ *for* $w$.

### Linear Inequalities

**7.** *Solve* $x + 6 \leq 14$ *and write interval notation.*

**8.** *Solve* $-6x \geq 18$.

### Compound Inequalities and Interval Notation

**9.** *Solve* $-2 \leq x + 5 < 9$ *and write interval notation.*

**10.** *Solve* $x + 1 < 0$ *or* $x - 2 > 5$.

**11.** *Write* $x < 1$ *or* $x \geq 5$ *in interval notation.*

### Absolute Value Equations

**12.** *Solve* $|x - 5| = 3$.

**13.** *Solve* $|x + 9| = -4$.

**14.** *A machine part is acceptable if its length is within* $0.03$ *cm of* $12.5$ *cm. Write an absolute value inequality for acceptable lengths* $L$.

### Absolute Value Inequalities

**15.** *Solve* $|x + 3| \leq 5$ *and write interval notation.*

**16.** *Solve* $|x - 2| > 4$.

## Day *Answer Key* Real Numbers, Properties, and Expressions

1. natural
2. irrational
3. $(-\infty, 4]$
4. $(-3, 2]$
5. $55$
6. $12$
7. distributive property
8. $x^3$
9. $\frac{p^4}{q^3}$
10. $9.3 \times 10^{-4}$
11. $10$
12. coefficient 8; constant $12$
13. $26$
14. $3y + 16$
15. $14 - 2x$
16. $-m^2n$

## Day *Explanations* Real Numbers, Properties, and Expressions

1. Evaluate the radical first: $\sqrt{64} = 8$. The smallest precise set is natural, although $8$ is also whole, integer, rational, and real.
2. A rational decimal must terminate or repeat one fixed block. This decimal keeps changing its pattern, so it is irrational.
3. All values at or below $4$ are included. Infinity always uses a parenthesis, and $4$ gets a bracket because it is included.
4. Use a parenthesis at $-3$ because it is excluded, and use a bracket at $2$ because it is included.
5. Work inside parentheses first, then square: $5 + 2(5)^2 = 5 + 50 = 55$.
6. Division and multiplication have the same priority, so go left to right: $24 \div 6 = 4$, then $4 \cdot 3 = 12$.
7. The factor $4$ multiplies both terms inside the parentheses, which is the distributive property.
8. The bases are the same, so add exponents: $8 + (-5) = 3$.
9. Subtract exponents across the fraction bar: $p^{6-2}q^{2-5} = p^4q^{-3} = \frac{p^4}{q^3}$.
10. Move the decimal $4$ places right to make $9.3$. Since the original number is small, use exponent $-4$.
11. Use parentheses for the negative input: $(-5)^2 + 3(-5) = 25 - 15 = 10$.
12. The coefficient multiplies the variable $t$, and the constant is the fixed term that does not depend on $t$.
13. Substitute $8$ for miles: $2.50(8) + 6 = 20 + 6 = 26$.
14. Distribute $-2$ to both terms first: $-2y + 16 + 5y$. Then combine like terms.
15. Subtracting the parentheses changes both signs: $5 - 2x + 9 = 14 - 2x$.
16. Like terms must have the exact same variable part. Only $-m^2n$ has $m^2n$.

## Day Answer Key Equations, Inequalities, and Absolute Value

1. $x = 7$
2. $x = 6$
3. no solution
4. infinitely many solutions
5. $h = \frac{2A}{b}$
6. $w = \frac{P-2l}{2}$
7. $(-\infty, 8]$
8. $x \leq -3$
9. $[-7, 4)$
10. $x < -1$ or $x > 7$
11. $(-\infty, 1) \cup [5, \infty)$
12. $x = 2$ or $x = 8$
13. no solution
14. $|L - 12.5| \leq 0.03$
15. $[-8, 2]$
16. $x < -2$ or $x > 6$

## Day Explanations Equations, Inequalities, and Absolute Value

1. Add 7 to both sides to get $4x = 28$, then divide by 4.
2. Subtract $3x$ and subtract 4 to get $4x = 24$, then divide by 4.
3. Distribute to get $5x - 10 = 5x + 3$. Subtracting $5x$ gives the false statement $-10 = 3$.
4. A true statement after the variables cancel means every allowed value of the variable makes the original equation true.
5. Multiply by 2 to get $2A = bh$, then divide by $b$ to isolate $h$.
6. Subtract $2l$ first, then divide by 2 because $w$ is multiplied by 2.
7. Subtract 6 to get $x \leq 8$. The endpoint is included, so use a bracket at 8.
8. Divide by $-6$ and reverse the inequality symbol.
9. Subtract 5 from all three parts: $-7 \leq x < 4$, which becomes $[-7, 4)$.
10. Solve each inequality separately because OR means values can satisfy either condition.
11. OR joins separate intervals with $\cup$. Use a parenthesis at 1 and a bracket at 5.
12. Split into $x - 5 = 3$ or $x - 5 = -3$, then solve both equations.
13. An absolute value represents distance, so it cannot equal a negative number.
14. "Within 0.03" means the distance from $L$ to 12.5 is at most 0.03.
15. Less-than-or-equal means inside: $-5 \leq x + 3 \leq 5$. Subtract 3 from all parts.
16. Greater-than means outside the boundary values, so split into $x - 2 < -4$ or $x - 2 > 4$.

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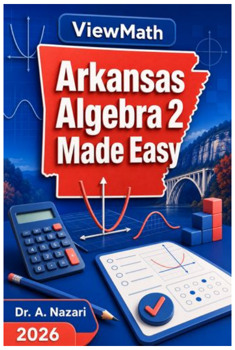

Study Guide

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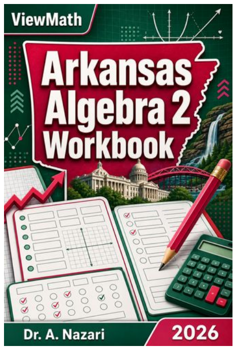

Workbook

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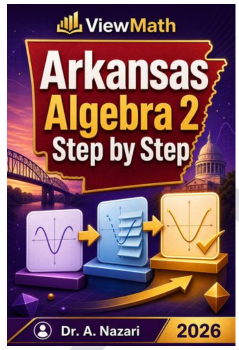

Step-by-Step

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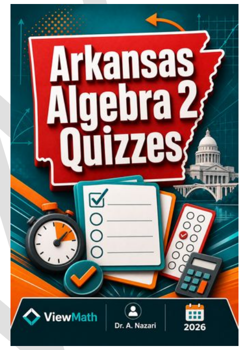

Quizzes

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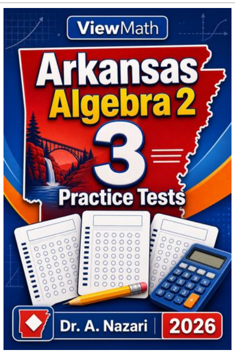

3 Practice Tests

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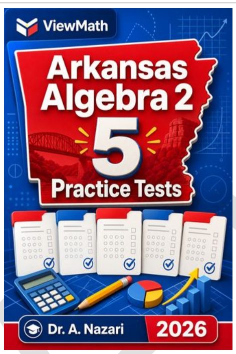

5 Practice Tests

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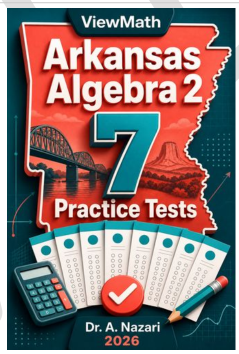

7 Practice Tests

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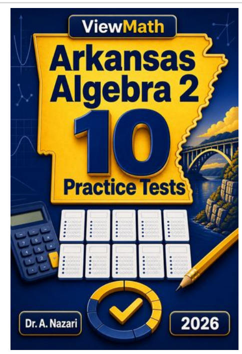

10 Practice Tests

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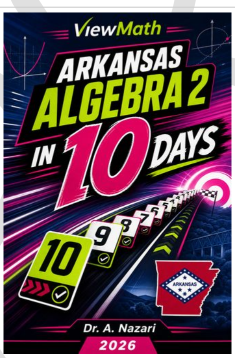

Math in 10 Days

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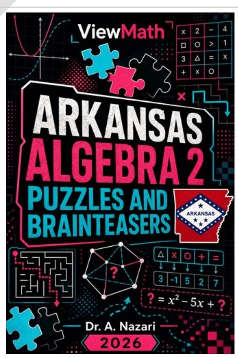

Puzzles

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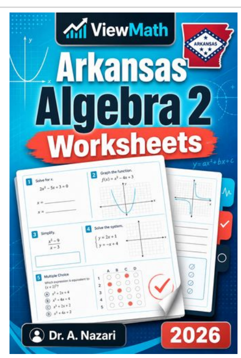

Worksheets

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