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PREMIUM EDUCATIONAL RESOURCES

ALGEBRA 1 · GRADES 8-9

Bell Ringers

180 Daily Warm-Ups

A Full-Year Spiral Review of Algebra 1 Foundations

180
Daily Warm-Ups

9
Thematic Months

3
Checkpoint Quizzes

Includes: Daily Bell Ringers · Complete Answer Key · Quarterly Quizzes
Teacher Implementation Manual · Monthly Overview Pages

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PREVIEW

importantly, trust the spiral — the seemingly random return to prior topics is precisely what builds durable, transferable mathematical fluency. Thank you for choosing UM Printables to support your students' mathematical journey.

Anatomy of a Daily Bell Ringer

Each daily bell ringer in this pack follows a consistent structure designed to maximize clarity, instructional value, and student independence. Understanding the anatomy of each warm-up will help you project, debrief, and grade bell ringers with confidence throughout the year.

Component	What It Does
Day Header Bar	Purple bar with the day number (1–180), week, and day of week. Helps teachers and students track progress through the year-long sequence.
Topic Label	Lighter purple sub-bar showing the current month's focus topic. Instantly identifies the strand the day's problems emphasize.
Problems (3–4)	Each problem is numbered and includes any necessary workspace. Problems blend current-month focus with deliberate spiral-back to prior months.
Worked Example (Mondays)	Purple callout at the top of Monday bell ringers. Models the week's spiraled concept using the I Do, We Do, You Do framework.
Real-World Hook (Fridays)	Cream callout framing Friday's math in an authentic real-world scenario — banking, sports, cooking, and more.
Common Misconception Tip (Fridays)	Orange callout flagging the single most common student error for the week, with a specific instructional fix.
UM Printables Footer	Branded footer on every page with page number, copyright, and the UM Printables brand line. Consistent throughout the resource.

Month	Days	Theme	Spiral Strands
—	After Day 120	Quarterly Checkpoint Quiz #2 (10 Q)	Cumulative: M1–M6
7	121–140	Exponent Rules & Polynomial Operations	M1–6: Distributive Prop, Combining Like Terms
8	141–160	Factoring & Intro to Quadratics	M1–7: FOIL, Distributive Prop
9	161–180	Statistics & Data Displays	M1–8: Two-Step Eq., Evaluating Expressions
—	After Day 180	Quarterly Checkpoint Quiz #3 (10 Q)	Cumulative: M1–M9 (full year)

3. Weekly Pacing Suggestions

The recommended weekly rhythm for each month is consistent and predictable, which helps both teachers and students develop a smooth classroom routine. **Monday** bell ringers open with a Worked Example callout that models the week's spiraled concept using the 'I Do, We Do, You Do' gradual-release framework. Teachers should briefly walk through this example before students begin the day's problems — typically 2 minutes of modeling, 5 minutes of student work, 2 minutes of debrief. **Tuesday through Thursday** follow a standard rhythm: project the bell ringer, give students 5–8 minutes of independent work time, then debrief for 2–3 minutes by having students share solutions and reasoning at the board.

Friday bell ringers feature a Real-World Hook problem that contextualizes the week's math in an authentic scenario — banking, sports statistics, cell phone plans, cooking, and more. Use this as an opportunity to discuss how the math shows up in students' lives outside of school. Each Friday's bell ringer also includes a Common Misconception Tip callout flagging the most frequent student error for that week's topic. Use this callout to inform your small-group instruction the following week.

For block schedules (90-minute periods), consider using two consecutive bell ringers back-to-back at the start of class — one as a true bell ringer (silent independent work) and the second as a partner-discussion or small-group activity. The 5–8 minute time estimate per bell ringer makes it easy to combine two within the natural opening of a longer block.

4. Standards Alignment (CCSS & TEKS)

This resource aligns comprehensively with the Common Core State Standards for Mathematics (CCSS-M) for Grade 8 and the high school Algebra categories, as well as the Texas Essential Knowledge and Skills (TEKS) for Grade 8 Algebra. The table below maps each month to its primary CCSS and TEKS standards. Note that spiral-back problems may also revisit standards from earlier grades (particularly 7.EE and 8.EE) for students who need additional reinforcement.

Month	Primary CCSS Standards	Primary TEKS Standards
1	8.EE.A.1, 8.EE.A.2, HSA-SSE.A.1a	A.10(A), A.10(B), A.10(D)
2	8.EE.C.7a, 8.EE.C.7b, HSA-REI.B.3	A.5(A), A.5(B)
3	HSA-REI.B.3, HSA-CED.A.4	A.5(A), A.12(E)

MONTH 2

Days 21–40

Theme: One- and Two-Step Equations

WEEKLY FOCUS	KEY CONCEPTS
• Week 1 — One-step equations using addition and subtraction • Week 2 — One-step equations using multiplication and division • Week 3 — Two-step equations of the form $ax + b = c$ • Week 4 — Equation word problems and spiral review of Month 1	• Addition Property of Equality: if $a = b$, then $a + c = b + c$ • Subtraction Property of Equality: if $a = b$, then $a - c = b - c$ • Multiplication Property of Equality: if $a = b$, then $a \times c = b \times c$ • Division Property of Equality: if $a = b$, then $a \div c = b \div c$ ($c \neq 0$) • Solving two-step equations: isolate the variable term first (add/subtract), then divide • Checking solutions: substitute the answer back into the original equation

VOCABULARY KEY

Equation	a mathematical statement that two expressions are equal, marked by =
Solution	the value of the variable that makes the equation true
Inverse operation	an operation that undoes another (e.g., addition undoes subtraction)
Isolate the variable	get the variable alone on one side of the equation
Two-step equation	an equation requiring two inverse operations to solve

PREREQUISITE SKILLS

All Month 1 skills, plus integer operations fluency and one-step equation solving.

LEARNING TARGETS

- Solve one-step equations using all four inverse operations and check the solution.
- Solve two-step equations of the form $ax + b = c$ and $ax - b = c$.
- Translate real-world scenarios into one- or two-step equations.
- Apply equation-solving to word problems involving cost, distance, and unknown quantities.

COMMON MISCONCEPTION

- Adding instead of subtracting (or vice versa) when isolating the variable — students sometimes do the same operation instead of the inverse.
- Dividing only the variable side, forgetting to divide the constant on both sides.
- Forgetting to perform the operation on BOTH sides of the equation.
- When checking, plugging the answer into the wrong side of the equation.

MONTH 5

Days 81–100

Theme: Writing Linear Equations (All Three Forms)

WEEKLY FOCUS	KEY CONCEPTS
• Week 1 — Writing equations in slope-intercept form from various information • Week 2 — Point-slope form: $y - y_1 = m(x - x_1)$ • Week 3 — Standard form: $Ax + By = C$, and converting between forms • Week 4 — Equations from two points; parallel and perpendicular lines	• Slope-intercept form: $y = mx + b$ — best for graphing and identifying slope/intercept • Point-slope form: $y - y_1 = m(x - x_1)$ — best when you know a point and a slope • Standard form: $Ax + By = C$, where A, B, C are integers and $A > 0$ • Writing an equation from two points: find slope, then use either point to find b • Parallel lines have equal slopes ($m_1 = m_2$) • For nonvertical lines, perpendicular slopes are negative reciprocals ($m_1 \times m_2 = -1$); horizontal and vertical lines are also perpendicular.

VOCABULARY KEY

Point-slope form	$y - y_1 = m(x - x_1)$; a linear equation form using a point and the slope
Standard form	$Ax + By = C$ with A, B, C integers and $A > 0$
Negative reciprocal	the negative of the flipped fraction (e.g., the negative reciprocal of $2/3$ is $-3/2$)
Parallel lines	lines in the same plane that never intersect (same slope, different y-intercept)
Perpendicular lines	lines that intersect at a 90° angle; for nonvertical lines, their slopes are negative reciprocals

PREREQUISITE SKILLS

All Month 4 graphing skills, plus comfort with two-step equations and the slope formula.

LEARNING TARGETS

- Write a linear equation in slope-intercept form given slope and a point, or two points.
- Convert between slope-intercept, point-slope, and standard forms of a linear equation.
- Determine the slope of a line parallel or perpendicular to a given line.
- Write the equation of a parallel or perpendicular line through a given point.

COMMON MISCONCEPTION

- Forgetting to flip AND negate when finding a perpendicular slope (e.g., perp. of $2/3$ should be $-3/2$, not $3/2$ or $-2/3$).
- Sign errors when simplifying point-slope form: $y - 3 = 2(x + 1) \rightarrow y = 2x + 5$, not $y = 2x + 1$.
- When converting to standard form, leaving non-integer coefficients or a negative leading coefficient.
- Mixing up which point to substitute when finding b after computing slope.

MONTH 9

Days 161–180

Theme: Statistics and Data Displays

WEEKLY FOCUS

- Week 1 — Measures of central tendency: mean, median, mode
- Week 2 — Measures of variation: range, IQR, mean absolute deviation
- Week 3 — Data displays: histograms, box plots, scatter plots
- Week 4 — Line of best fit, two-way tables, and cumulative year-end review

KEY CONCEPTS

- Mean: the arithmetic average; $\text{sum of values} \div \text{count of values}$
- Median: the middle value when data is sorted (or average of two middle values for even count)
- Mode: the most frequent value (there may be none, one, or several)
- Range: $\text{max} - \text{min}$
- Quartiles (Q1, Q2, Q3): divide sorted data into four equal parts; Q2 = median
- IQR (Interquartile Range): $Q3 - Q1$; measures spread of the middle 50%
- Outlier rule: a value is an outlier if it is $< Q1 - 1.5 \cdot \text{IQR}$ or $> Q3 + 1.5 \cdot \text{IQR}$
- Five-number summary: min, Q1, median, Q3, max (used to build a box plot)
- Scatter plot: a graph of bivariate data; patterns show positive, negative, or no association
- Line of best fit: a line that best models the trend in a scatter plot

VOCABULARY KEY

Mean	the arithmetic average of a data set
Median	the middle value when data is sorted
Mode	the most frequently occurring value in a data set
Quartile	one of three values (Q1, Q2, Q3) that divide sorted data into four equal parts
Outlier	a data value much smaller or larger than the rest of the data
Bivariate data	data with two variables per observation (plotted as ordered pairs)
Association	the relationship between two variables (positive, negative, or none)

PREREQUISITE SKILLS

Basic arithmetic with integers, fractions, and decimals; comfort with the coordinate plane.

LEARNING TARGETS

- Compute the mean, median, and mode of a data set.
- Compute the range and IQR and use the $1.5 \cdot \text{IQR}$ rule to identify outliers.
- Read and interpret box plots, histograms, and scatter plots.
- Use a line of best fit to make predictions and interpret two-way tables.

COMMON MISCONCEPTION

- Computing the median without sorting the data first.
- Forgetting that there can be zero, one, or multiple modes in a data set.
- Confusing Q1 and Q3 (Q1 is the median of the LOWER half; Q3 is the median of the UPPER half — neither includes the overall median).
- Reading percentages from a two-way table using the wrong row/column totals as the denominator.

DAY 1

Week 1 · Monday

Month 1 · Expressions, Properties & Order of O

WORKED EXAMPLEEvaluate: $3 + 4 \times (6 - 2) \div 2$ **Step 1:** Parentheses first: $(6 - 2) = 4$. The expression becomes $3 + 4 \times 4 \div 2$.**Step 2:** Multiplication and division, left to right: $4 \times 4 = 16$, then $16 \div 2 = 8$.**Step 3:** Add: $3 + 8 = 11$.*Key insight:* Multiplication and division have equal priority — work them left to right, not multiplication first.

1. Evaluate: $10^2 + 4 \times 4$

2. Evaluate $3n + 5$ when $n = 8$.

3. Simplify by combining like terms: $2x + 6 + 3x - 2$

DAY 2

Week 1 · Tuesday

Month 1 · Expressions, Properties & Order of O

1. Evaluate $5n + 6$ when $n = 5$.

2. Simplify by combining like terms: $4x + 7 + 4x - 5$

3. Use the Distributive Property to expand: $7(10x + 7)$

4. Which property justifies: $(6 + 3) + 6 = 6 + (3 + 6)$?

DAY 55

Week 3 · Friday

Month 3 · Multi-Step and Literal Equations

REAL-WORLD HOOK

Cooking: A recipe for 4 servings uses 2 cups of broth. You want to make enough for a party of 14. How much broth? Equation: $2/4 = x/14 \rightarrow 4x = 28 \rightarrow x = 7$ **cups**. Literal-equation thinking powers recipe scaling.

1. Solve for x: $3x + 11 = 8x + -4$

2. Solve for x: $2(5x + 8) + 8 = 74$

3. Simplify by combining like terms: $2x + 4 + 1x - 1$

4. **REAL-WORLD:** The sum of a number and 9 is 16. Find the number.

DAY 56

Week 4 · Monday

Month 3 · Multi-Step and Literal Equations

WORKED EXAMPLE

Solve: $x/3 + 2 = 6$.

Step 1: Subtract 2 from both sides: $x/3 = 4$.

Step 2: Multiply both sides by 3: $x = 12$.

Step 3: Check: $12/3 + 2 = 4 + 2 = 6$ ✓

Key insight: Multiplying both sides by the denominator clears the fraction — a useful simplification.

1. Solve for x: $5x + 11 = 4x + 13$

2. Solve for x: $2(3x + 10) + 13 = 45$

3. Solve for n: $6n = 66$

DAY 1

ANSWER KEY · Week 1 · Monday

Month 1 · Expressions, Properties & Order of O

1. Evaluate: $10^2 + 4 \times 4$

→ Evaluate exponent first

$$10^2 = 100$$

→ Multiply

$$4 \times 4 = 16$$

→ Add

$$100 + 16 = 116$$

ANSWER: 116**2. Evaluate** $3n + 5$ **when** $n = 8$.

→ Substitute the value

$$3(8) + 5$$

→ Multiply

$$24 + 5$$

→ Add

$$29$$

ANSWER: 29**3. Simplify by combining like terms:** $2x + 6 + 3x - 2$ → Group like terms (x -terms together, constants together)

$$(2x + 3x) + (6 - 2)$$

→ Combine x -coefficients

$$5x$$

→ Combine constants

$$4$$

→ Write the simplified expression

$$5x + 4$$

ANSWER: $5x + 4$

PREVIEW

DAY 26

ANSWER KEY · Week 2 · Monday

Month 2 · One- and Two-Step Equations

1. Solve for y: $y + 19 = 25$ *→ Isolate the variable by subtracting the constant from both sides*

$$y + 19 - 19 = 25 - 19$$

→ Simplify

$$y = 6$$

→ Check (optional)

$$(6) + 19 = 25 \checkmark$$

ANSWER: $y = 6$ **2. Solve for x: $6x = 42$** *→ Isolate the variable by dividing both sides by the coefficient*

$$6x \div 6 = 42 \div 6$$

→ Simplify

$$x = 7$$

→ Check (optional)

$$6(7) = 42 \checkmark$$

ANSWER: $x = 7$ **3. Evaluate: $6 \times 8 \times 3$** *→ Multiply first two factors*

$$6 \times 8 = 48$$

→ Multiply by third factor

$$48 \times 3 = 144$$

ANSWER: 144

PREVIEW

Quarterly Checkpoint Quiz #1

Cumulative Review: Days 1–60 (Months 1–3)

Instructions: Solve each problem showing all work. Each question is worth 1 point (10 points total). Time: 20–25 minutes.

1. [Two-Step Equations] Solve for y : $4y + 7 = 19$

2. [Combining Like Terms] Simplify by combining like terms: $9x + 4 + 5x - 7$

3. [Properties of Real Numbers] Which property justifies: $5 \times 6 = 6 \times 5$?

4. [Equations with Fractions] Solve for x : $(x/3) + 3 = 6$

5. [One-Step Equations (Addition/Subtraction)] Solve for x : $x + 11 = 27$

6. [One-Step Equations (Multiplication/Division)] Solve for n : $9n = 18$

7. [Variables on Both Sides] Solve for x : $2x + 10 = 5x + -2$

8. [Literal Equations] Solve for m : $y - y_1 = m(x - x_1)$

9. [Translating Words to Algebra] Translate into an algebraic expression: "five less than a number." Use n for the number.

10. [Properties of Real Numbers] Which property justifies: $5 \times 9 = 9 \times 5$?

PREVIEW

Quarterly Checkpoint Quiz #2

Cumulative Review: Days 1–120 (Months 1–6)

Instructions: Solve each problem showing all work. Each question is worth 1 point (10 points total). Time: 20–25 minutes.

1. [Literal Equations] Solve for y : $2x + 3y = 12$

2. [Evaluating Expressions] Evaluate $8x + 4$ when $x = 6$.

3. [Slope from Two Points] Find the slope of the line passing through $(5, 1)$ and $(10, 2)$.

4. [Two-Step Equations] Solve for n : $5n + 13 = 58$

5. [Two-Variable Inequalities] Is the point $(-1, -1)$ a solution to the inequality $4x + 3y < 7$?

6. [Literal Equations] Solve for w : $P = 2l + 2w$

7. [Finding Intercepts] Find the x - and y -intercepts of: $5x + 5y = 5$

8. [Distributive Property] Use the Distributive Property to expand: $6(10x + 3)$

9. [Two-Step Equations] Solve for y : $6y + 4 = 16$

10. [Standard Form Conversion] Convert to standard form ($Ax + By = C$, with A, B, C integers and $A > 0$): $y = 4x + 0$

PREVIEW

Quarterly Checkpoint Quiz #3

Cumulative Review: Days 1–180 (Months 1–9, Full Year)

Instructions: Solve each problem showing all work. Each question is worth 1 point (10 points total). Time: 20–25 minutes.

1. [Systems by Elimination] Solve the system by elimination:

$$2x + 3y = 22$$

$$2x - y = -2$$

2. [Scatter Plot Association] Describe the association shown in a scatter plot where as x increases, y tends to decrease.

3. [Multi-Step Equations with Distributive Property] Solve for x : $4(2x + 10) + 7 = 87$

4. [Slope from Two Points] Find the slope of the line passing through $(1, 1)$ and $(4, 0)$.

5. [Two-Step Equations with Parentheses] Solve for x : $5(x + 2) = 25$

6. [Point-Slope Form from Two Points] Write the equation in point-slope form of the line through $(1, 3)$ and $(3, 9)$.

7. [Distributive Property] Use the Distributive Property to expand: $6(5x + 8)$

8. [Evaluating Expressions] Evaluate $9n + 9$ when $n = 4$.

9. [Identifying Quadratic Features] For the quadratic $y = -5x^2 - 4x - 2$, identify a , b , and c . State whether the parabola opens upward or downward.

10. [Subtracting Polynomials] Subtract: $(6x^2 + 2x + 2) - (3x^2 + 5x + 5)$

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