

keep scrolling to get a sneak peek!

Help your students focus & be accountable for their review of the Algebra 2 content you taught! There are **100 questions over two versions** for students to practice different test style and open-ended questions.

Perfect for review days, homework, or extra practice **before the EOY & final exams!**

ALGEBRA 2 EOY REVIEW PACKET

TEST PREP

ALGEBRA 2 EOY REVIEW - SECTION 1: SOLVING EQUATIONS

Directions: Answer each question below. Write your final answer in the answer line.

11. $-3 < 2x + 1 \leq 9$
 $-1 \quad -1 \quad -1$
 $-4 < 2x \leq 8$
 $\frac{-4 < 2x \leq 8}{2}$
 $-2 < x \leq 4$
 $[-2, 4]$

12. $x^2 - 5x - 14 \geq 0$
 $(x-7)(x+2) \geq 0$
 $\begin{array}{c|c|c} x=2 & x=7 & x=10 \\ (-1)(-8) & (-1)(2) & (9)(12) \\ \hline \checkmark & \times & \checkmark \end{array}$
 $[-\infty, -2] \cup [7, \infty)$

13. $|3x - 4| > 8$
 $3x - 4 > 8 \quad 3x - 4 < -8$
 $+4 \quad +4$
 $\frac{3x > 12}{3} \quad \frac{3x < -4}{3}$
 $x > 4 \quad x < -4/3$
 $(-\infty, -4/3) \cup (4, \infty)$

14. Graph solution to the inequality $y > x^2 - 2x - 3$. Determine the type of boundary line and shaded region.
Dashed + above the curve

15. $-x^2 + 4x < 3$
 $+x^2 - 4x + x^2 - 4x$
 $0 < x^2 - 4x + 3$
 $0 < (x-3)(x-1)$
 $\begin{array}{c|c|c} x=1 & x=3 & x=5 \\ 0 & (-1)(-2) & 0 & (2)(4) \\ \hline \checkmark & \times & \checkmark \end{array}$

16. $12x + 51 \leq 7$
 $2x + 5 \leq 7$
 $-5 \quad -5$
 $\frac{2x \leq 2}{2}$
 $x \leq 1$

17. $x^2 - 4x^2 - x + 4 = 0$
 $x^2(x-4) - 1(x-4) = 0$
 $(x^2-1)(x-4) = 0$
 $(x-1)(x+1)(x-4) = 0$
 $x-1=0 \quad x+1=0 \quad x-4=0$
 $x=1 \quad x=-1 \quad x=4$
 $x = -1, 1, 4$

18. Which equation matches the graph?
a) $y = 2x + 21 + 3$
b) $y = -2x + 21 + 3$
c) $y = |x + 21 + 3|$
d) $y = 2x - 21 + 3$

19. Looking at the graph, which statement is true? Select all that apply.
I. Even Degree
II. Odd Degree
III. Positive Leading Coefficient
IV. Negative Leading Coefficient

20. Given the graph, select all of the values that are in the domain.
 -4
 -1
 3
 5
 6
 10

21. Given the graph, which statement is true?
a) The function represents growth.
b) The function represents decay.
c) The horizontal asymptote is $y = 3$.
d) The y-intercept is 0.8.

22. Given the graph, identify the asymptotes.

23. Which equation matches the graph?

24. Which equation matches the graph?

25. Given the graph, identify the asymptotes.



100 Questions, 2 versions, Detailed Key

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Why do you need this?



Quick & easy. Just print & go.
No prep required!



Targeted practice. Students review key Algebra 2 concepts.



Flexible use. Assign as individual worksheets or the entire packet.

Algebra 2 EOY Review Test Prep Packet

ALGEBRA 2 EOY REVIEW - SECTION 1: SOLVING
Name: _____ Date: _____ V.A.1
Directions: Solve each equation. Write your final answer in the answer box.

1. $3^{2x} = 27$	2. $x^4 - 5x^2 - 14 = 0$
3. Solve the system. $\begin{cases} 2x + 1 \\ x^2 - 4 \end{cases}$	4. $9 = 12x - 71$
5. $\sqrt{x+5} = x - 1$	6. $5^x = 18$
7. $\log x + \log(x-3) = 1$	8. $x^2 - 6x + 13 = 0$
9. $x^3 - 4x^2 - x + 4 = 0$	10. $\frac{5}{x^2 - 5x}$

ALGEBRA 2 EOY REVIEW - SECTION 5: FUNCTION OPERATIONS
Name: _____ Date: _____ V.B.5
Directions: Answer each question below. Write your final answer in the answer box on the right.

37. Given the functions, select all statements that are true.
 $f(x) = x^2 - 4$ $g(x) = x - 2$
 $(f + g)(x) = x^2 + x - 6$
 $(g - f)(x) = -x^2 + x + 2$
 $(f \cdot g)(x) = x^3 - 2x^2 - 4x + 8$
 $(\frac{f}{g})(x) = x + 2$
 $(\frac{g}{f})(x) = \frac{1}{x+2}, x \neq 2, -2$

38. What is the remainder?
 $\frac{x^3 - 4x + 1}{x - 2}$
a) -3
b) 0
c) 1
d) 5

39. What are the zeros of the function? Select all that apply.
 $f(x) = x^4 - 2x^3 - 11x^2 + 12x + 36$
 -3
 -2
 -1
 0
 1
 2
 3

40. Simplify.
 $\frac{x+4}{x-1} - \frac{2x}{x+3}$
a) $\frac{x^2 + 9x + 12}{(x-1)(x+3)}$
b) $\frac{-x^2 + 9x + 12}{(x-1)(x+3)}$
c) $\frac{x^2 + 2x + 6}{(x-1)(x+3)}$
d) $\frac{-x^2 + 9x + 12}{2x + 2}$

41. Simplify.
 $\frac{x^2 - 9}{x^2 - 4} + \frac{x - 3}{x + 2}$
a) $\frac{x+3}{x-2}$
b) $\frac{x+3}{x-2}, x \neq \pm 2, 3$
c) $\frac{x-3}{x-2}$
d) $\frac{x+3}{x-2}, x \neq 2$

42. Simplify. What is the coefficient of your final answer?
 $\sqrt{27} - 3\sqrt{12} + 2\sqrt{3}$

How would you rate your level of understanding after completing this page?
☆☆☆☆☆

Answer Box

37.
38.
39.
40.
41.
42.

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Algebra 2 Review Packet – Teacher Overview

ALGEBRA 2 END-OF-YEAR REVIEW - TEACHER OVERVIEW

Thank you for using this Algebra 2 end of year review with your students! This resource is designed to provide comprehensive, skill-based practice across the major concepts typically covered in an Algebra 2 course.

Rather than organizing problems by unit, this review is structured by skill. Each section intentionally mixes function types so students must focus on strategy and understanding rather than the pattern recognition.

How to Use This Resource

This review can be used in several ways:

- As a full cumulative end-of-year review
- As targeted skill practice by assigning individual sections
- As structured practice before a district final or state assessment
- As a practice for retakes or reassessment

Because the sections are organized by skill, teachers can easily differentiate by assigning specific sections based on student needs.

What's Included

- **Version A - Skill Mastery Review**
These questions are in an open-response format designed for deeper practice and full problem solving.
- **Version B - Test-Style Practice**
Mixed question formats including multiple choice, short answer, and open response to reflect common final exam and standardized test structures.
- Detailed worked out answer keys for both versions.
- Student study checklist with "I can" statements.

Both versions assess the same skills in the section same order using different question formats.

Functions Assessed

Problems throughout this review draw from the following function families commonly taught in Algebra 2: Absolute Value, Quadratic, Polynomial, Rational, Radical, Exponential, and Logarithmic. Function types are intentionally mixed within each section to reinforce strategy and conceptual understanding.

Sections & Number of Questions

Section 1: Solving Equations (10 questions)	Section 2: Inequalities (7 questions)	Section 3: Graphing Functions (9 questions)	Section 4: Analyzing Functions (10 questions)
Section 5: Operations (6 questions)	Section 6: Inverses (3 questions)	Section 7: Modeling & Applications (5 questions)	50 questions total

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How to use this resource

Differentiation suggestion

Content breakdown

Algebra 2 Review Packet – Master Planning Grid

ALGEBRA 2 EOY REVIEW - MASTER PLANNING GRID, VERSION A

SECTION 1: SOLVING EQUATIONS		SECTION 3: GRAPHING FUNCTIONS	
Q#	Specific Skill	Q#	Specific Skill
1	Solving exponential equations by rewriting the base.	18	Graphing an absolute value equation.
2	Solving a quadratic equation by factoring.	19	Graphing a polynomial equation.

Content & skill
break down

ALGEBRA 2 EOY REVIEW - MASTER PLANNING GRID, VERSION B

SECTION 1: SOLVING EQUATIONS		SECTION 3: GRAPHING FUNCTIONS	
Q#	Specific Skill	Q#	Specific Skill
	Solving an absolute value equation.	18	Identifying an equation from a graph of an absolute value transformation.
	Solving a quadratic equation by factoring.	19	Determining polynomial degree and leading coefficient from a graph.

ALGEBRA 2 EOY REVIEW - MASTER PLANNING GRID, VERSION A

SECTION 4: ANALYZING FUNCTIONS		SECTION 6: INVERSES	
Q#	Specific Skill	Q#	Specific Skill
27	Identifying increasing & decreasing intervals of a polynomial from a graph.	43	Finding the inverse given a graph.
28	Identifying end behavior of a polynomial function.	44	Verifying two functions are inverses using composition.
29	Identifying the asymptotes of a rational function.	45	Verifying inverse functions graphically.
30	Identifying discontinuities of a rational function.		

Aligned questions
& skills

ALGEBRA 2 EOY REVIEW - MASTER PLANNING GRID, VERSION B

SECTION 4: ANALYZING FUNCTIONS		SECTION 6: INVERSES	
Q#	Specific Skill	Q#	Specific Skill
27	Determining degree, multiplicity, and crossing behavior for factored polynomials.	43	Finding the inverse of a linear function.
28	Determining end behavior from leading term of a polynomial function.	44	Verifying whether two functions are inverses using composition.
29	Identifying vertical asymptotes from a rational equation.	45	Identifying inverse functions from graphs.
30	Identifying horizontal asymptotes from a rational equation.		

Available for both
versions

SECTION 2: INEQUALITIES	
Q#	Specific Skill
11	Solving a compound inequality.
12	Solving a quadratic inequality in one variable.
13	Solving an absolute value inequality.
14	Graphing a quadratic inequality in two variables.
15	Solving a quadratic inequality and flip the inequality symbol.
16	Solving an absolute value inequality.
17	Identifying a solution set on a graph of a linear-quadratic system of inequalities.

SECTION 5: FUNCTION OPERATIONS	
Q#	Specific Skill
37	Adding & subtracting in function notation.
38	Multiplying & dividing polynomials (synthetic can be used).
39	Dividing polynomials with long division.
40	Adding rational expressions.
41	Dividing rational expressions.
42	Adding & subtracting & multiplying radical expressions.

SECTION 5: FUNCTION OPERATIONS	
Q#	Specific Skill
37	Performing and analyzing function operations (add, subtract, multiply, and divide).
38	Using synthetic division/Remainder Theorem.
39	Finding all zeros of a polynomial in standard form.
40	Subtracting rational expressions.
41	Dividing rational expressions.
42	Simplifying radical expressions.

Algebra 2 Review Packet - Student Mastery Checklist

Hold students accountable for their learning!

Pre & post self reflection by skill

Aligned questions & skills by version

Students can add their name!

ALGEBRA 2 EOY REVIEW - _____'S MASTERY CHECKLIST

Directions: Before you begin, read the statement and rate your current understanding.

- 1 - I don't know this yet
- 2 - I've seen it but need help
- 3 - I think I can try it on my own first
- 4 - I am confident I can do it on my own

Then go through and attempt the problems in this review packet. After you complete the problems, go back to the checklist and check off each skill you can now do and rate your confidence in performing the skill.

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
9	2, 9	I can solve higher degree polynomial equations.			
19	-	I can graph polynomial functions and identify their key features.			
27, 28	19, 28	I can determine end behavior of a polynomial function.			
35	26	I can identify intervals of increasing & decreasing.			
38	-	I can multiply polynomials.			
39	38	I can perform polynomial synthetic and long division.			

POLYNOMIAL FUNCTION SKILLS

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
10	10	I can solve rational equations.			
40	40	I can add and subtract rational expressions.			
41	41	I can multiply and divide rational expressions.			
29, 36	23, 25, 29, 30	I can identify vertical and horizontal asymptotes of a rational equation or graph.			
29, 36	36	I can determine the domain and range of a rational function.			

RATIONAL FUNCTION SKILLS

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
4	4	I can solve radical equations.			
25	21	I can graph radical functions and identify domain and range.			
42	42	I can simplify and combine radical expressions.			

RADICAL FUNCTION SKILLS

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
3	3	I can solve exponential equations.		<input type="checkbox"/>	
22	22	I can graph exponential functions and identify key features.		<input type="checkbox"/>	
48, 50	48	I can write and interpret exponential growth or decay models.		<input type="checkbox"/>	
46	46	I can determine whether the data is best modeled by an exponential function and create an accurate model.		<input type="checkbox"/>	

EXPONENTIAL FUNCTION SKILLS

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
5	5	I can solve logarithmic equations.		<input type="checkbox"/>	
5	6	I can rewrite between exponential and logarithmic forms.		<input type="checkbox"/>	
23, 32	23, 32	I can graph logarithmic functions and identify key features.		<input type="checkbox"/>	

LOGARITHMIC FUNCTION SKILLS

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
37	37	I can add and subtract functions using function notation.		<input type="checkbox"/>	
43	43	I can find the inverse of a function algebraically.		<input type="checkbox"/>	
44	44	I can verify whether two functions are inverses or not.		<input type="checkbox"/>	
45	45	I can recognize inverse relationships from tables and graphs.		<input type="checkbox"/>	

INVERSES & FUNCTION OPERATIONS SKILLS

Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4
Ver A Q#	Ver B Q#	Skill	Confidence Before 1-4	Skill Practiced?	Confidence Now 1-4

SYSTEMS & MODELING FUNCTION SKILLS

Algebra 2 Review Packet – Content Assessed

7 Sections Organized by Skill

1. Solving Equations
2. Solving & Graphing Inequalities
3. Graphing Functions
4. Analyzing Functions
5. Function Operations
6. Inverses
7. Modeling & Applications

7 Functions Covered

1. Absolute Value
2. Quadratic
3. Polynomial
4. Rational
5. Radical
6. Exponential
7. Logarithmic

Algebra 2 Review Packet - Version A

- 50 open ended questions
- 7 sections separated by skill with mixed function practice
- Detailed answer keys

Answer boxes for quick & easy checking & grading

Name: _____ Date: _____ V.A.3

ALGEBRA 2 EOY REVIEW - SECTION 3: GRAPHING FUNCTIONS

Directions: Graph each given function. Write your final answer in the answer box at the bottom.

18. Sketch the function. Identify the vertex. $p(x) = -2 x - 1 + 3$	19. Sketch the function. Identify the x-intercepts & multiplicities. $g(x) = (x + 2)(x - 1)^2(x - 3)$	20. Sketch the function. Identify the axis of symmetry & vertex. $m(x) = \frac{1}{2}(x - 5)(x - 1)$			
21. Sketch the function. Include asymptotes & intercepts. $h(x) = \frac{1}{x^2 + x - 2}$	22. Sketch the function. Identify the domain & range. $f(x) = 2(3)^{x-4} - 4$	23. Sketch the function. Identify the domain & range. $p(x) = \log(x + 3) - 2$			
24. Sketch the function. Identify the vertex & axis of symmetry. $g(x) = -2(x - 1)^2 + 3$	25. Sketch the function. Identify the domain & range. $h(x) = \sqrt{x - 4} + 1$	26. Given the graph, identify $f(-4)$.			
Answer Box	18.	19.	20.	21.	22.
	23.	24.	25.	26.	How would you rate your level of understanding after completing this page? ★★★★★

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Easily know what version & section they are working on

Plenty of space to show work!

Student self reflection question at the end

Algebra 2 Review Packet – Version B

- 50 test style questions: MC, select all, fill in the blank, True/False
- 7 sections separated by skill with mixed function practice
- Detailed answer keys

Name: _____ Date: _____ V.B.5

ALGEBRA 2 EOY REVIEW - SECTION 5: FUNCTION OPERATIONS

Directions: Answer each question below. Write your final answer in the answer box on the right.

<p>37. Given the functions, select all statements that are true.</p> $f(x) = x^2 - 4 \quad g(x) = x - 2$ <p><input type="checkbox"/> $(f + g)(x) = x^2 + x - 6$</p> <p><input type="checkbox"/> $(g - f)(x) = -x^2 + x + 2$</p> <p><input type="checkbox"/> $(f \cdot g)(x) = x^3 - 2x^2 - 4x + 8$</p> <p><input type="checkbox"/> $\left(\frac{f}{g}\right)(x) = x + 2$</p> <p><input type="checkbox"/> $\left(\frac{g}{f}\right)(x) = \frac{1}{x+2}, x \neq 2, -2$</p>	<p>38. What is the remainder?</p> $\frac{x^3 - 4x + 1}{x - 2}$ <p>a) -3 b) 0 c) 1 d) 5</p>	<p>Answer Box</p> <p>37.</p> <p>38.</p> <p>39.</p> <p>40.</p> <p>41.</p> <p>42.</p>
<p>39. What are the zeros of the function? Select all that apply.</p> $f(x) = x^4 - 2x^3 - 11x^2 + 12x + 36$ <p><input type="checkbox"/> -3 <input type="checkbox"/> -2 <input type="checkbox"/> -1 <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3</p>	<p>40. Simplify.</p> $\frac{x+4}{x-1} - \frac{2x}{x+3}$ <p>a) $\frac{x^2+9x+12}{(x-1)(x+3)}$ b) $\frac{-x^2+9x+12}{(x-1)(x+3)}$ c) $\frac{x^2+2x+4}{(x-1)(x+3)}$ d) $\frac{-x^2+9x+12}{2x+2}$</p>	<p>How would you rate your level of understanding after completing this page?</p> <p>☆☆☆☆☆</p>
<p>41. Simplify.</p> $\frac{x^2-9}{x^2-4} + \frac{x-3}{x+2}$ <p>a) $\frac{x+3}{x-2}$ b) $\frac{x+3}{2}, x \neq \pm 2, 3$ c) $\frac{x-3}{x-2}$ d) $\frac{x+3}{x-2}, x \neq 2$</p>	<p>42. Simplify. What is the coefficient of your final answer?</p> $\sqrt{27} - 3\sqrt{12} + 2\sqrt{3}$	<p>How would you rate your level of understanding after completing this page?</p> <p>☆☆☆☆☆</p>

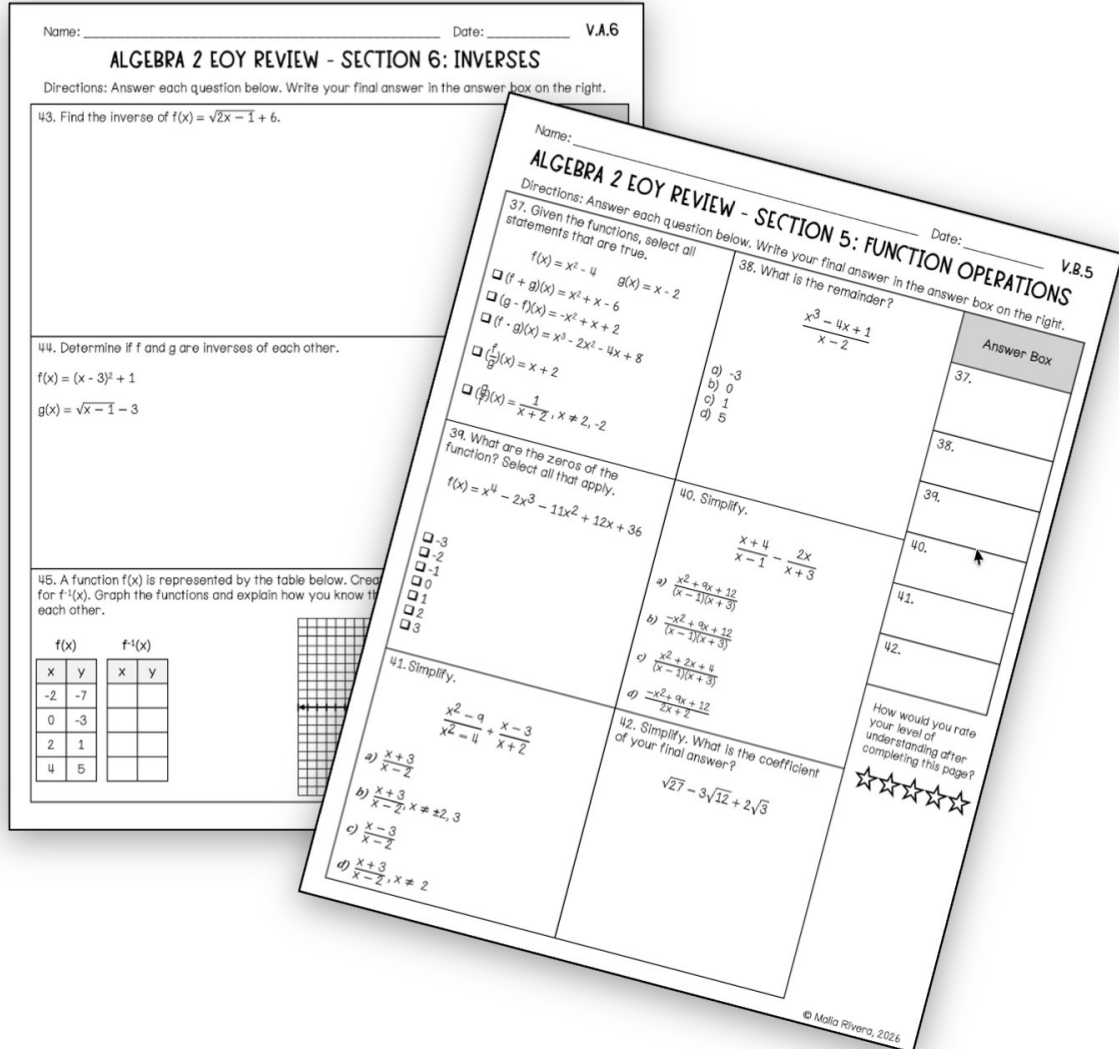
Easily know what version & section they are working on

Plenty of space to show work!

Student self reflection question at the end

Answer boxes for quick & easy checking & grading

how to use this resource



This is a great set of worksheets to use when reviewing content for the Algebra 2 end of year final exams or state tests.

You can assign them as individual worksheets or as the entire packet.

This is also perfect for homework or a **substitute-friendly** assignment!

You may also enjoy ...

END OF YEAR REVIEW TASK CARDS

Algebra 2

2 Write a quadratic equation in vertex form that has a vertex at (3, -2) and opens downward.

18 Identify the parent function and describe the transformation(s).
 $f(x) = 3\log(x - 1) + 4$

40 Write the first 5 terms of the arithmetic sequence given by the recursive formula:
 $a_1 = 7, a_n = a_{n-1} + 4$

25 Factor.
 $2x^4 - 3x^2 - 5$

50 Find $(f \circ g)(x)$ given
 $f(x) = x^2 + 1$
 $g(x) = 2x - 3$



60 Skill Based Review Task Cards

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GRAPHING FUNCTIONS REVIEW

7 Functions to Graph

ABSOLUTE VALUE FUNCTION
Directions: Graph each radical function. Then identify the domain & range.
6. $f(x) = 12x + 4$ or $2|x + 2|$
Domain: $(-\infty, \infty)$
Range: $[0, \infty)$

GRAPHING RADICAL FUNCTION
Directions: Graph each radical function. Then identify the domain & range.
1. $f(x) = \sqrt{x - 2} + 3$
Domain: $[2, \infty)$
Range: $[3, \infty)$

2. $f(x) = -\sqrt{x}$
Domain: $[-1, \infty)$
Range: $(-\infty, 0]$

GRAPHING POLYNOMIAL FUNCTION
Directions: Sketch each polynomial function.
1. $f(x) = x^3 - 2x^2 - x + 2 = (x-1)(x+1)(x-2)$
Zeros: -1, 1, 2 all multiplicity of 1



Algebra 2 - Review Packet

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ALGEBRA 2 SPIRAL REVIEW

End of Year Practice

ALGEBRA 2 SPIRAL REVIEW #7
Directions: Show your work for each question.
2. Solve the equation and check extraneous solutions.
 $\frac{x+2}{x+1} - \frac{1}{x-2} = \frac{2}{x}$
 $\frac{x^2+2x}{x^2-1} - \frac{1}{x-2} = \frac{2}{x}$
 $\frac{x^2+2x}{x^2-1} - \frac{1}{x-2} - \frac{2}{x} = 0$
 $\frac{x^2+2x}{x^2-1} - \frac{1}{x-2} - \frac{2}{x} = 0$
 $x^2 - 2x - 1 = 0$
 $x = 1 \pm \sqrt{2}$
 $x = 1 + \sqrt{2}$
 $x = 1 - \sqrt{2}$

ALGEBRA 2 SPIRAL REVIEW
Directions: Show your work for each question.
5. Find all real solutions:
 $x^3 - 5x^2 + 4 = 0$
 $(x^2 - 4)(x - 1) = 0$
 $(x - 2)(x + 2)(x - 1) = 0$
 $x - 2 = 0 \quad x + 2 = 0 \quad x - 1 = 0 \quad x + 1 = 0$
 $x = 2 \quad x = -2 \quad x = 1 \quad x = -1$
 $x = -2, -1, 1, 2$



10 Spiral Review Worksheets

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hey there!

My name is Malia and I'm passionate about making learning and practicing math fun. I love creating engaging math resources for my students and I hope your students enjoy this activity too!

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