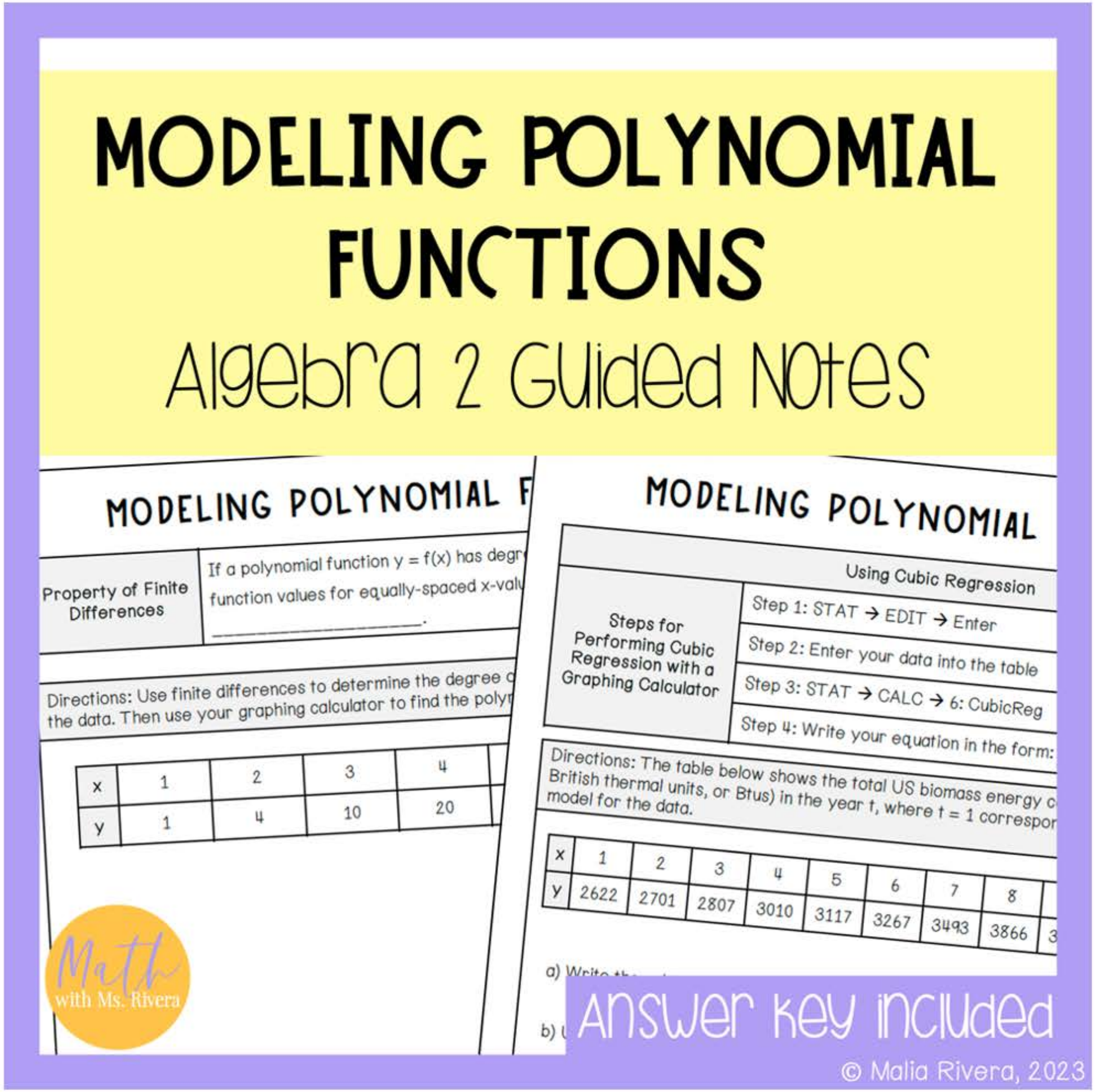
keep scrolling to get a sneak peak!

This set of guided notes will walk Algebra 2 students through modeling polynomial functions. All you need to do is print & make copies for your students!

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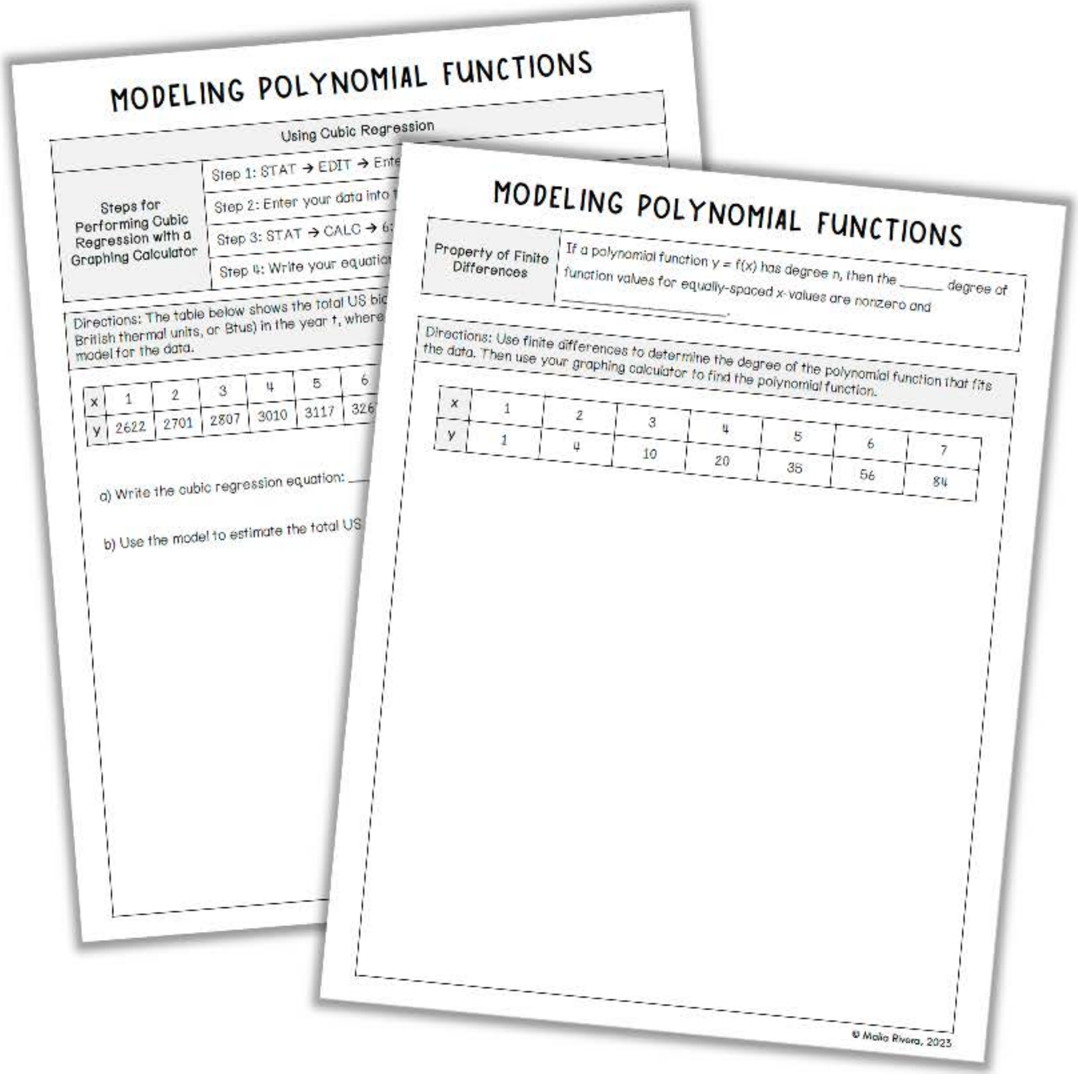
# why do you need this?

# Algebra 2 Guided Notes Modeling Polynomial Functions

- It's simple and done-for-you! Just print and make copies!
- Students can work on essential Algebra 2 skills.
- Aligns to CCSS, TEKS, and VA SOLs!
- Suggested and detailed answer keys are included for you!

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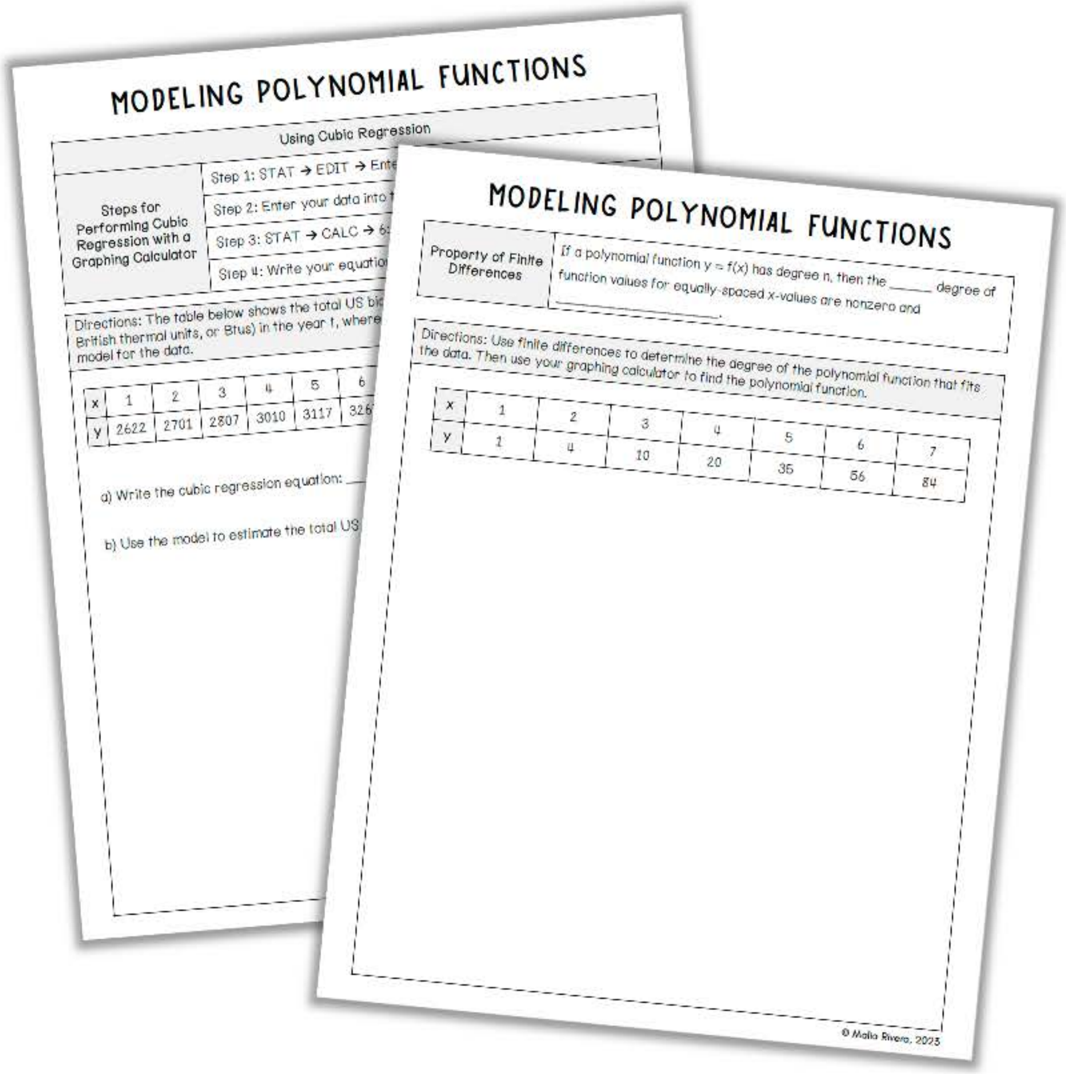
# Algebra 2 Guided Notes: Modeling Polynomial Functions *includes*:




- ✅ 2 pages of guided notes
- ✅ Property of Finite Differences to Model Polynomial Functions
- ✅ Cubic Regression Using a Graphing Calculator

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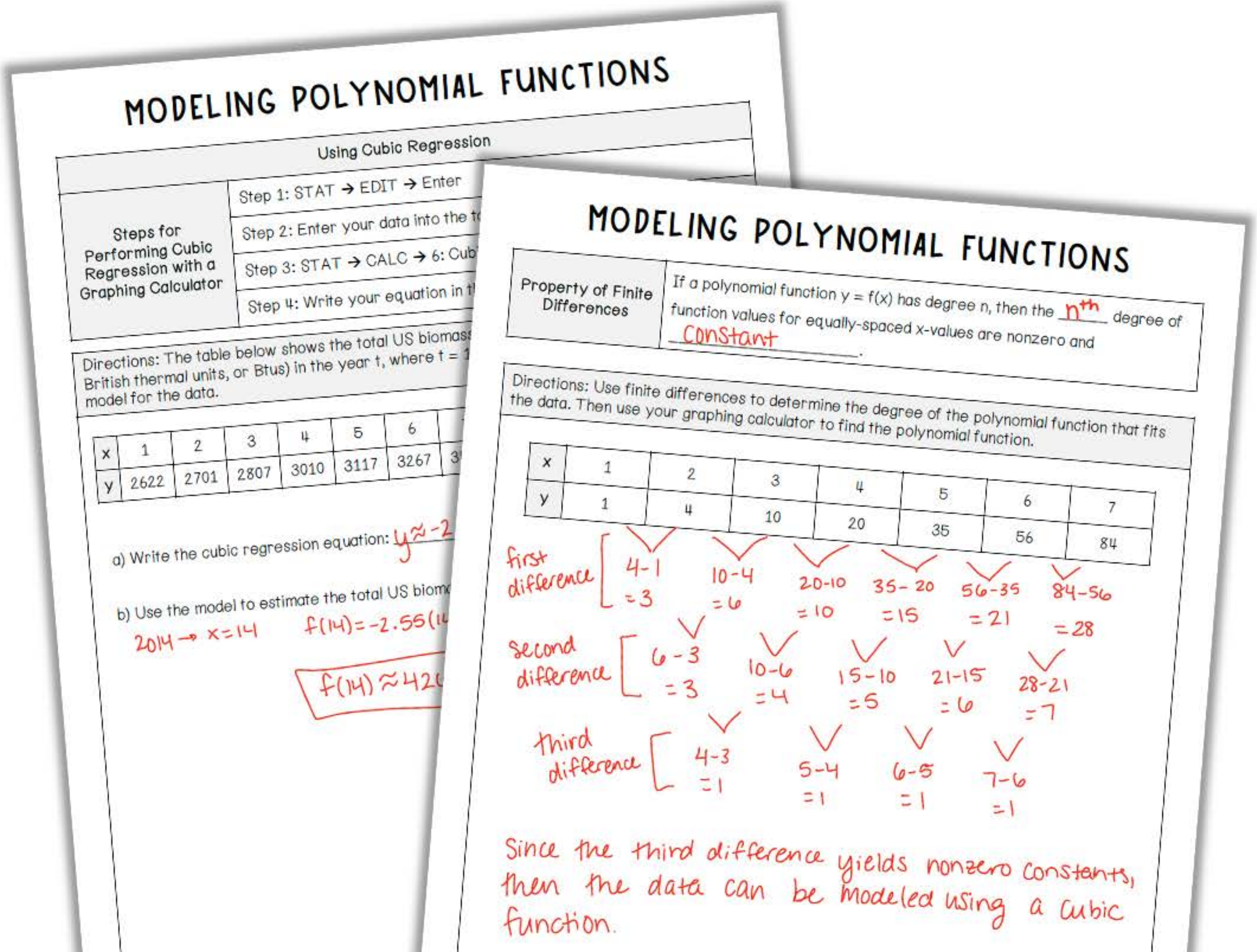
# Algebra 2 Guided Notes: Modeling Polynomial Functions *includes*:

✅ Detailed answer keys


MODELING POLYNOMIAL FUNCTIONS

| Using Cubic Regression | |
|---|---|
| Steps for Performing Cubic Regression with a Graphing Calculator | Step 1: STAT → EDIT → Enter |
| | Step 2: Enter your data into the t |
| | Step 3: STAT → CALC → 6: Cub |
| | Step 4: Write your equation in t |

Directions: The table below shows the total US biomass British thermal units, or Btus) in the year t, where t = 1 model for the data.

| x | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| y | 2622 | 2701 | 2807 | 3010 | 3117 | 3267 |

a) Write the cubic regression equation: $y \approx -2$

b) Use the model to estimate the total US biom

2014 → x=14 f(14)=-2.55(1

f(14) ≈ 42

MODELING POLYNOMIAL FUNCTIONS

| Property of Finite Differences | If a polynomial function y = f(x) has degree n, then the $n^{th}$ degree of function values for equally-spaced x-values are nonzero and constant. |
|---|---|

Directions: Use finite differences to determine the degree of the polynomial function that fits the data. Then use your graphing calculator to find the polynomial function.

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| y | 1 | 4 | 10 | 20 | 35 | 56 | 84 |

first difference: 4-1 =3, 10-4 =6, 20-10 =10, 35-20 =15, 56-35 =21, 84-56 =28

second difference: 6-3 =3, 10-6 =4, 15-10 =5, 21-15 =6, 28-21 =7

third difference: 4-3 =1, 5-4 =1, 6-5 =1, 7-6 =1

Since the third difference yields nonzero constants, then the data can be modeled using a cubic function.

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# Check out what *other teachers* are saying:

⭐⭐⭐⭐⭐

"This was great practice for my Algebra II students after I presented the lesson. Next Year, I may use them as notes."

- Vonda B.

⭐⭐⭐⭐⭐

"Great resource for what we were currently covering in precalc!"

- Megan M.

⭐⭐⭐⭐⭐

"I used this in conjunction with another document, but this would have worked fine on its own. The students found it much easier to understand the concept using these guided notes."

- Cheryl W.

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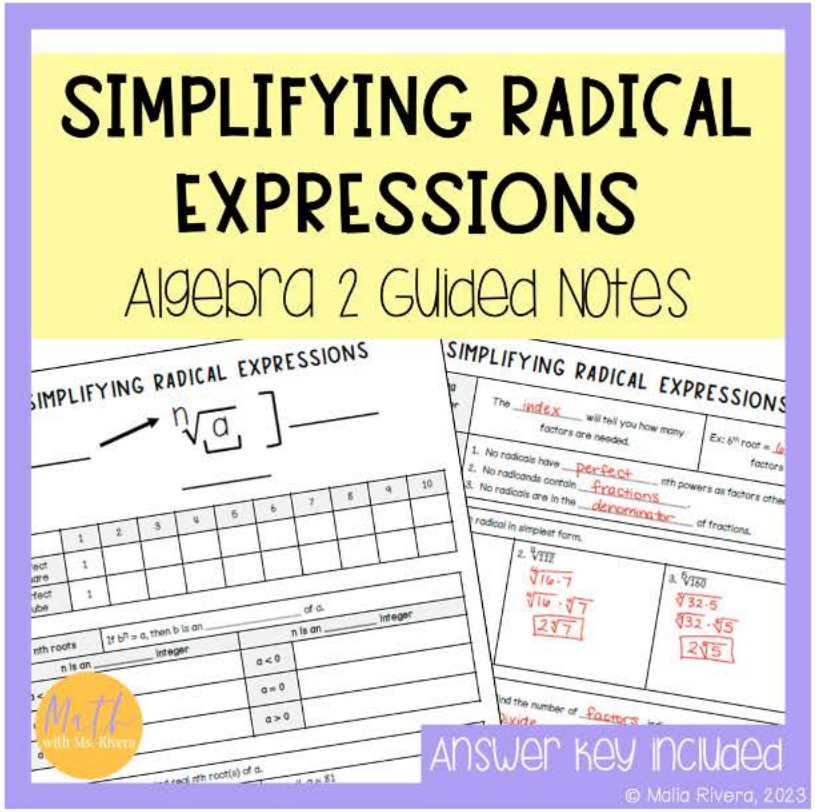


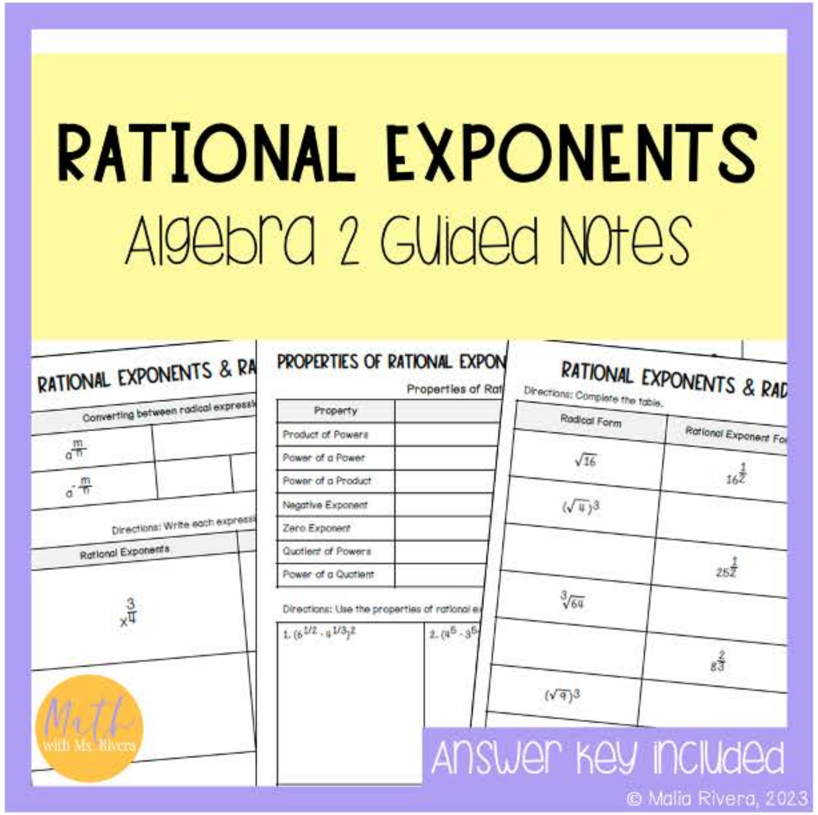


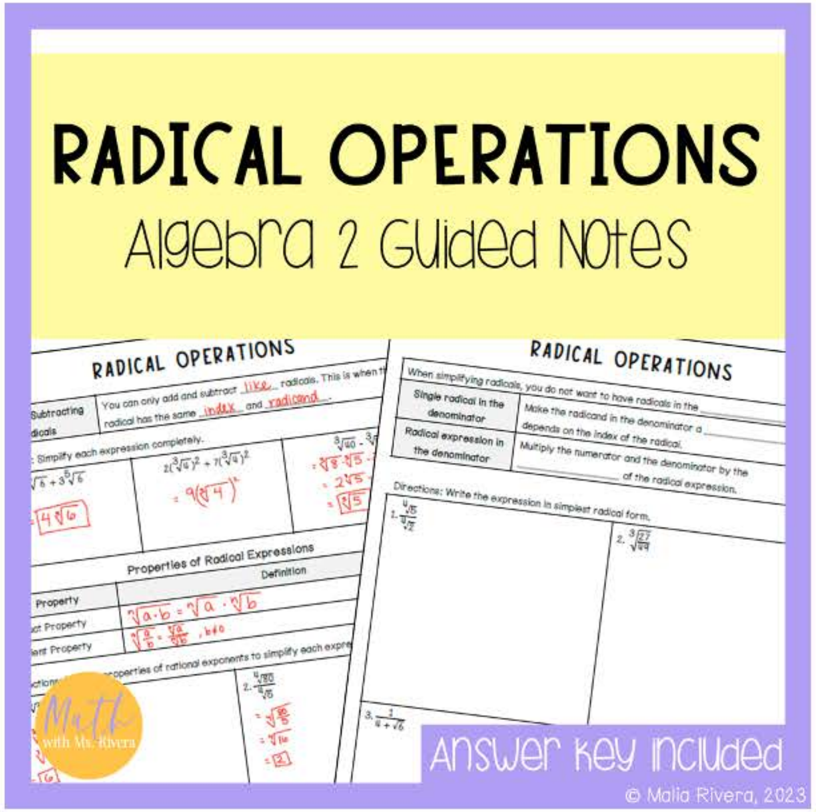


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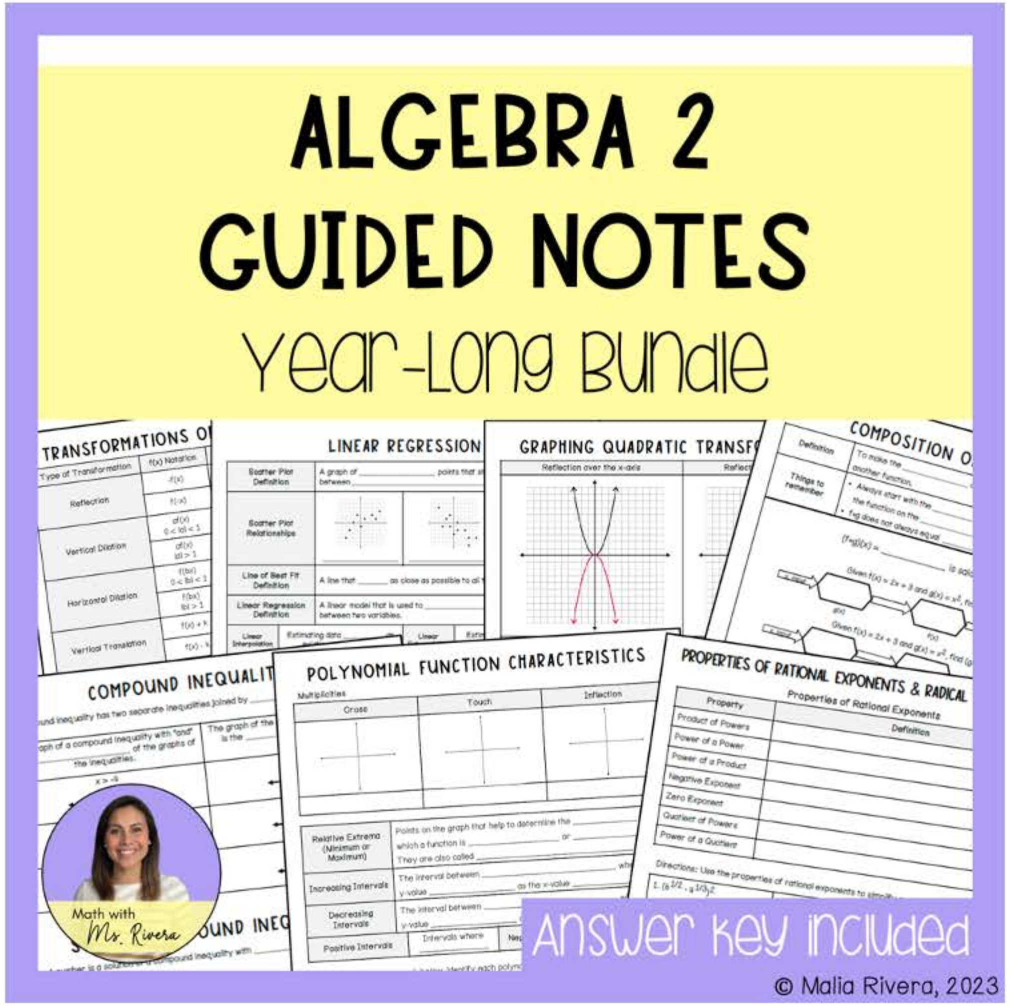


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# hey there!

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 these Modeling Polynomial Functions guided notes for Algebra 2 that can be used all year long!

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