Robert Colson’s

Lesson 4.3: **Multiplying and Dividing Rational Expressions**

|  |  |
| --- | --- |
| Objectives | * Use the structure of rational expressions to rewrite simple rational expressions in different forms. * Understand that rational expressions form a system * analogous to the system of rational numbers and use that understanding to multiply and divide rational expressions. |
| Language Objective | * SWBAT use a 3-reads protocol to interpret an Algebra 2 word problem by listening to the teacher’s reading and summarizing the situation in a sentence, reading it aloud to state the math question, and silently rereading to list key facts and figures. |
| Essential Understanding | Rational expressions form a system similar to the system of rational numbers and can be multiplied and divided by applying the properties of operations as they apply to rational expressions. |

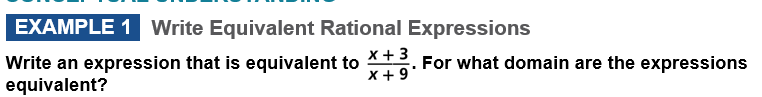
**A blue and white logo

AI-generated content may be incorrect.A graph of x and y with red arrow

AI-generated content may be incorrect.**

1. **​What is the domain of this function?**
2. **​Sketch a function that resembles the graph, but restrict its domain to exclude 2.**
3. **​Use Structure Consider the function you have sketched.**

**What kind of function might have a graph like this? Explain.**

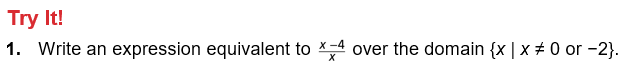
****

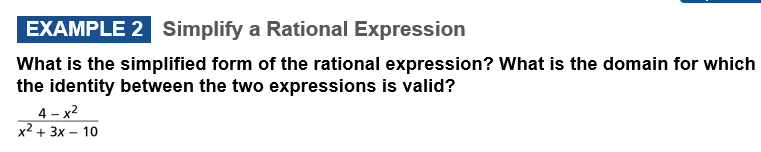
**A black background with a black square

AI-generated content may be incorrect.  
**

**A close-up of a sign

AI-generated content may be incorrect.**

****

****

**A black text on a white background

AI-generated content may be incorrect.**

**A black and white math equation

AI-generated content may be incorrect.**

**A white background with black text

AI-generated content may be incorrect.**

****

**A black text on a white background

AI-generated content may be incorrect.**

**A black and white math equation

AI-generated content may be incorrect.**

**A close-up of a math problem

AI-generated content may be incorrect.**

**A math problem with numbers

AI-generated content may be incorrect.**

**A black math equation with a dot

AI-generated content may be incorrect.**

**A math equation with black text

AI-generated content may be incorrect.**

**A black text on a white background

AI-generated content may be incorrect.**

**A math problem with numbers and symbols

AI-generated content may be incorrect.**

**A close-up of a white background

AI-generated content may be incorrect.**

**A white cube with red text

AI-generated content may be incorrect.A white cylinder with red x and black text

AI-generated content may be incorrect.**

|  |  |  |
| --- | --- | --- |
| 1. **​The company compares the ratios of surface area to volume for two more containers. One is a rectangular prism with a square base. The other is a rectangular prism with  a rectangular base. One side of the base is equal to the side length of the first container, and the other side is twice as long. The surface area of this second container is 4*x*2 + 6*xh*. The heights of the two containers are equal. Which has the smaller surface area-to-volume ratio?** | **First Read - Understanding the Context** |  |
| *What is the core of the problem?*   * I think this problem is about... |  |
| **Second Read - Interpreting the Question** |  |
| *What are we trying to find out?*   * I know the problem is asking...because... |  |
| **Third Read - Identifying Information** |  |
| *What are the important quantities, relationships, and other relevant information?*   * The quantities are... * I can count... * These quantities help me to answer... * The information from the situation that we need is... |  |
| Solution (show and explain your answer) | |
|  | |
| Interpretation of solution (interpret your solution in your own words) | |
|  | |

**A white sheet with black text and black text

AI-generated content may be incorrect.**