

## Writing Rational Functions Teacher

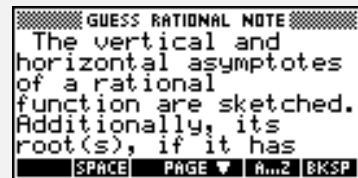
For the

### Objectives:

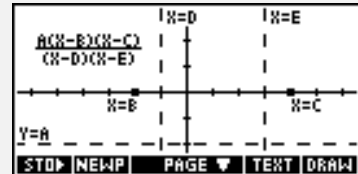
Using the **GUESS RATIONAL** applet, the student will write the equation of a rational function given horizontal and vertical asymptotes and a root.

### Functionality:

When the student presses **START**, the **GUESS RATIONAL NOTE** will be displayed.



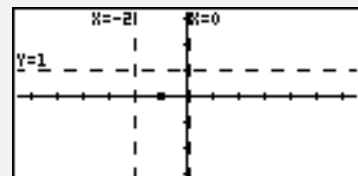
After reading the note, the student should press **SKETCH** for further explanation.



**VIEWS** allows the student to select a new problem, enter the rational function, vertically zoom to see a complete graph, or view the problem.



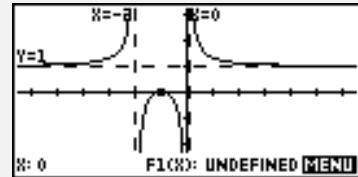
**New Problem** displays a graph with horizontal and vertical asymptotes and a root for the student to write the rational function that has these characteristics.



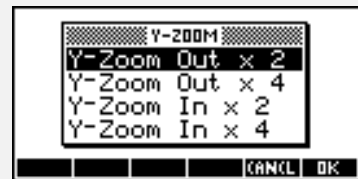
**Guess Function** prompts the student to enter the coefficients and constants of the numerator and denominator of the rational function.

After entering the rational function, a message box will display the status of the entered information. **GREAT JOB!** indicates the function is correct. **NUMERATOR IS CORRECT**, **DENOMINATOR IS CORRECT**, or **NEITHER IS CORRECT** could also be displayed

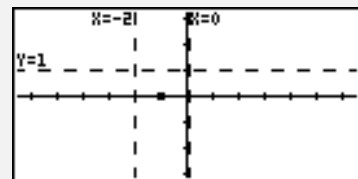
After the message box, the graph of the student's rational function will be plotted on the original problem for comparison purposes.



In the event that a complete graph is not seen, **Y-Zoom** allows the student to vertically zoom in or out by a factor of 2 or 4.



**See Problem** allows the student to view the problem again if needed.



Ideas can be applied to:  
Algebra II, Precalculus

Programs associated with this applet:  
.GRAT.GR, .GRAT.NP, .GRAT.GA, .GRAT.YZ, .GRAT.SP, .GRAT.ST,  
.GRAT.SV