Rational Function Project

Tile Art

You will use rational functions to create tile art. You must turn in the following:

1. A function briefing including your equation and all key features of the graph. You must include detailed explanations of what each feature is and how it was found. Explanations <u>must</u> be written in complete sentences and you must use correct mathematical notation and terminology.
   a. The equation of your rational function
   b. X-intercepts & y-intercepts (*explain how to find them*)
   c. Vertical asymptotes & any holes (*explain why the occur, the difference between them, and how to find them*)
   d. The behavior of the function at the vertical asymptote (*as x approaches the vertical asymptote from each direction, what does f(x) approach, make sure you use proper notation*)
   e. End-behavior: As x gets really large, what functions does *f(x)* approach? What type of asymptote is formed? (*explain how you find the asymptote and make sure you use proper notation*)
   f. Domain & Range (*explain what they are and how they are found*)
   g. An x/y table, showing points used in order to graph the function.
2. Your tile art
   a. The graph must match the function discussed in your briefing and show enough points to accurately represent the overall shape of the graph
   b. The art work should be 8.5" x 8.5" on cardstock
   c. Your art should be colored and/or decorated

Tile Project Due Dates

3rd period due Tuesday 2/25/2020
6th period due Wednesday 2/26/2020

10% off every day that it is late (including non school days)!

Please turn in this sheet with your project.

Tile Art Project
Enter rubric description

	FFB **1 pts** Complete, but shows no understanding of concept	Approaches **2 pts** Complete and shows some understanding of concept	Meets **3 pts** Complete, and shows understanding of concept	Exceeds **4 pts** Complete and shows full understanding of concept
Write-Up				
Knowledge & Understanding **30 %**	FFB Only 1-2 criteria items are included; or all 10 criteria items with 7-10 mathematical errors	Approaches 3-6 criteria items are included; or all 10 criteria items with 4-6 mathematical errors;	Meets 7-10 criteria items are included or all 10 criteria items with 3-4 mathematical errors	Exceeds All 10 criteria items are included with no mathematical errors
Communication **30 %**	FFB Explanations are not in complete sentences or no Mathematical Notation present; or missing more than 7 explanations.	Approaches Explanations are not in complete sentences or Mathematical notation and terminology is present, but incorrect, or missing 5-7 explanations.	Meets Explanations are in complete sentences with correct mathematical notation and terminology, but missing 1-4 explanations.	Exceeds Explanations are complete and written in complete sentences with correct mathematical notation and terminology.
Organization & Neatness **10 %**	FFB Criteria items are not labeled	Approaches Some criteria items are labeled	Meets Criteria items are labeled, but not easy to find	Exceeds Criteria items are labeled correctly, and easy to find
Art Work				
Correct, carefully drawn graph **10 %**	FFB Graph is not present	Approaches Graph does not match the function or is zoomed in too far to represent the overall function.	Meets Graph vaguely matches the function but is not accurately drawn or does not have enough points	Exceeds Graph matches the function and is accurately drawn and the scale is appropriate.
Correct Size **10 %**	FFB Graph is not 8.5"x8.5"	Approaches	Meets Graph does not completely fill 8.5"x8.5" square	Exceeds Graph completely fills 8.5"x8.5" square
Creativity **10 %**	FFB Tile is not colored/decorated	Approaches Tile has some color/decoration	Meets 8.5"x8.5" tile is not completely colored/decorated	Exceeds 8.5"x8.5" tile is completely colored/decorated

Final Score: _____%