Pre-AP Algebra 2
Unit 8 - Rational Function Project
Due _____

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

1. **(70 %)** A function briefing including your equation and all key features of the graph. You must include detailed explanations of what each features is and how it was found. Explanations must 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 they 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 function 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)*

2. **(30%)** Your ceiling tile art
   a. The graph must match the function discussed in your briefing
   b. The art work should be approximately 24" x 24"
   c. Your art should be colored and/or decorated.

Write-Up

Knowledge & Understanding	30%
Clear, Detailed Communication	30%
Organization & Neatness	10%

Art Work

Correct graph (very carefully drawn)	10%
Correct Size for posting	10%
Creativity	10%