Pop Test Rational Functions 11.5

1. Sketch a graph of a function with the following properties:

   vertical asymptotes at:  $x = 2, x = 3$
   horizontal asymptotes at:  $y = 1$
   x intercepts at $(-2, 0), (1, 0)$
   y intercept at $(0, \frac{-1}{3})$
   $f(x)$ is positive for $x \in (1, 2)$; graph crosses the horizontal asymptote
   $f(x)$ is positive for $x \in (3, +\infty)$
   $f(x)$ is negative for $x \in (-2, 1)$
   $f(x)$ is positive for $x \in (-\infty, -1)$ graph does not cross the horizontal asymptote
   $f(x)$ is negative for $x \in (+2, +3)$
   relative maximum at approximately $(2.3, -25.64)$

2. Write the equation of the graph you just drew: _____________________________