Business PreCalculus MATH 1643 Section 004, Spring 2014

Worksheet 21

1- Find the domain of the rational function $f(x) = \frac{x-7}{x^2-6x-7}$.

2- Find the vertical asymptote(s) of $f(x) = \frac{x^2-4}{x^2+x-6}$.

3- Find the horizontal asymptote(s) of $f(x) = \frac{2x-1}{x^2-4}$.

4- Find a rational function $f(x) = \frac{N(x)}{D(x)}$ that has $f(0) = 0$, $f(x) \to 2$ as $x \to \pm\infty$, has no vertical asymptote and is symmetric about the y-axis.

5- Find the x-intercepts of $f(x) = \frac{x+1}{x-1}$.

6- Find the y-intercepts of $f(x) = \frac{x+2}{x^2+4}$.