

Test 3 Study Guide

Sec 4.5 and Worksheet E: Graphs of Rational Functions

- Finding key features of a rational function, i.e., domain, y-intercept, zeros, VA and HA.
- Graphing a rational function using key features. Sometimes it is necessary to plot a few additional points.

Sec 4.6 Solving Inequalities

- Using graphs to solve $f(x) > 0$ or $f(x) < 0$. For $f(x) > 0$, read all inputs where function is above x-axis. For $f(x) < 0$, read inputs where function is below x-axis;

Or

- Find all zeros and undefined inputs and test intervals using table of signs.

$$\begin{aligned} f(x) &= (x^2 - 2x + 4)(2x - 1) \\ &= 2x^3 - 5x^2 + 10x - 4 \end{aligned}$$