

## Homework

1. Graph each of the following Rational Functions, by first analyzing the following key information:

- x-intercept(s).
- y-intercept.
- vertical asymptote(s).
- horizontal asymptote.
- behaviours at the asymptotes.

a.  $f(x) = \frac{5x-10}{2x+3}$

b.  $f(x) = \frac{2x+1}{x^2-4x-5}$

c.  $f(x) = \frac{2x^2-5x+2}{(x+1)(x^2-9)}$

2. Determine the solution set for each of the following rational inequalities.

a.  $\frac{x-1}{x+2} < 0$

b.  $\frac{x^2-9}{x^2-1} < 0$

c.  $\frac{x+2}{x-1} > 1$