Group: _____   Present:_____

1. Consider $f(x) = \frac{x-1}{x+2}$. Domain of f : _____ .
   (Graph in the standard window)

   Now trace. What do you see near $x = -2$?:

   Graph in ZDECIMAL now, and zoom out once. What do you see now at $x = -2$?:

   $y = f(x)$ has a _____ asymptote at $x =$ _____ .

   What happens to the values of f as $x \to +\infty$? as $x \to -\infty$?

   Support your claim algebraically:

2. Graph the rational function $f(x) = \frac{x^4 - 3x^3 + 2x^2}{x^2 - 10x + 24}$.
   Viewing window for a complete graph:
   [_____, _____] $\times$ [_____, _____].
   What is the end behavior for this function? Support your answer algebraically.

   Can you see all of the local minimums and maximums?
   Change the viewing window to $[-1, 2.5] \times [-0.1, 0.1]$. What do you see now?:

   (This is an example of _____ behavior)