

In class, I did the following example:

Let  $f(x) = \frac{(x-1)(x-2)}{x^2}$  .

- (a) Find the vertical and horizontal asymptotes.
- (b) For what values of  $x$  is  $f(x)$  increasing?  
For what values of  $x$  is  $f(x)$  decreasing?
- (c) Find the local min and max points. (Find both  $x$  and  $y$  coordinates.)
- (d) For what values of  $x$  is  $f(x)$  concave up?  
For what values of  $x$  is  $f(x)$  concave down?
- (e) Find all  $x$ -values of inflection point(s).
- (f) Using the above information, sketch the graph of  $f(x)$ .

13. Now, let  $f(x) = \frac{(x+2)(2x+1)}{x^2}$  , and do (a)-(f) as above.