*Strategy for Graphing*

1. Find/plot key points, such as intercepts.
2. Identify any asymptotes.
3. Identify the domain of and any symmetries the curve may have.
4. Find and .
5. Find the critical points of , and identify the function’s behavior at each one.
6. Find where the curve is increasing/decreasing.
7. Find the points of inflection, if any occur, and determine the concavity of the curve.
8. Sketch the curve by plotting key points, asymptotes, and intervals of inc/dec minding concavity.

Ex Analyze and sketch a graph of the function. Label any intercepts, relative extrema, points of inflection, and asymptotes.

1. 4.6.10

Local Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Local Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I.P.(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Open Int. of inc on : \_\_\_\_\_\_\_

1. 4.6.16

Local Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Local Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I.P.(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Open Int. of inc on : \_\_\_\_\_\_\_

1. 4.6.42 given

Local Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Local Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I.P.(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Open Int. of inc on : \_\_\_\_\_\_\_

1. 4.6.34 which = 0 when





Local Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Local Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I.P.(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Open Int. of inc on : \_\_\_\_\_\_\_

1. 4.6.53

Local Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Local Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

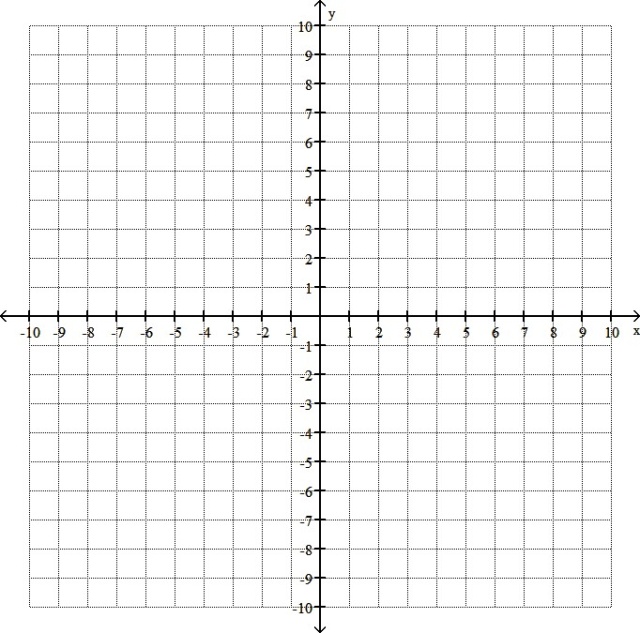
Absolute Max: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Absolute Min: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I.P.(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Open Int. of inc on : \_\_\_\_\_\_\_

Ex (Thomas 4.5.63) (if time) The sketch of the graphs of and on the same graph. Approximate the graph of , given that the graph passes through the point .



Ex Sketch a function with the following properties:

is defined everywhere

when

when

on

on

when

on

on