IB Math 2 Inflection point and the intervals of concavity Name

For the given function

1) Find the x-coordinate where : The point is called an inflection point at which concavity changes.

2) Find the interval where the curve is concave up and the curve is concave down: The curve is concave up If t  and the curve is concave down if .

a.  b. 

1. Use the Second Derivative Test to determine the nature of the stationary points for

a.  b. 

2. Given the graph of , sketch the graphs of  and .

a.



b.

Apply the second derivative test to find the relative extrema of the functions, and apply the inflection point test to find all inflection points.

3.  4.  5.  6. 

Sketch by hand the graph of each function. Identify and label all extrema, inflection points, intercepts and asymptotes. Show the intervals of increasing, decreasing, and concavity clearly.

7.  8. 

9. 19D.2 all