**2.*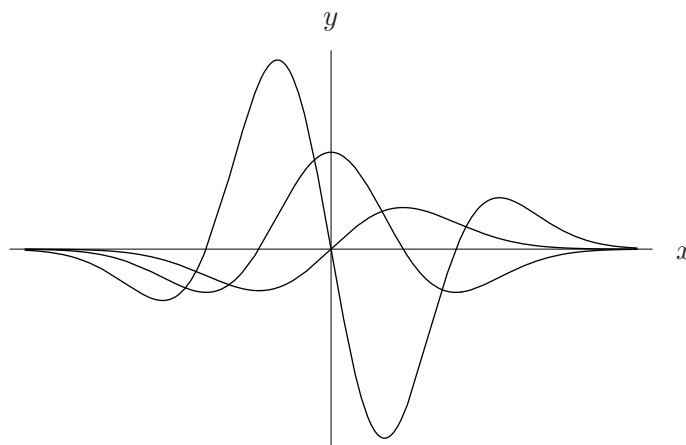* (9 points) In the figure below, are the graphs of three functions, f, f', and f''. In the smaller figures, each graph is shown alone. To the right of the lower graphs give a clear explanation of how you determined which graph is f, which is f', and which is f''.

Explanation: Note that graph B cannot be the graph of the derivative of either other function, because B has only one zero. Thus, B must be f. Graph B has two local extrema, and Graph C has two zeros–and C is negative where B is decreasing and positive where B is increasing. Thus, C if f'. Graph C has three local extrema and those correspond to the zeros of Graph A. Plus, Graph A represents the increasing/decreasing behavior of C–and thus is f''.

$y = $ Graph A
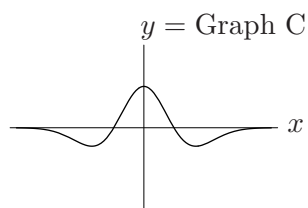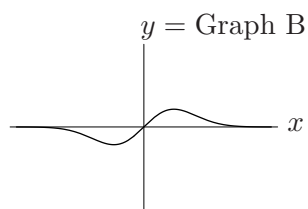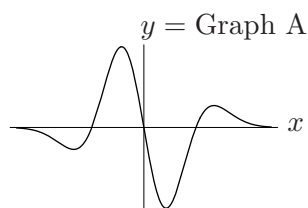
$y = $ Graph B

$y = $ Graph C

The graph of f corresponds to Graph_____B_____

The graph of f' corresponds to Graph_____C_____

The graph of f'' corresponds to Graph_____A_____