Consider the graph of $y = f(x)$ where $f(x) = \cosh x$ and the graph of $y = g(x)$ where $g(x) = ax^2 + bx + c$, each over the interval $[-\ln 2, \ln 2]$. We wish to find constants *a*, *b*, and *c* such that both *f* and *g* agree at the endpoints of this interval and the arc length for *f* over this interval is numerically the same as the area under the graph of *g* over this interval. Note that since the graph of $y = f(x)$ is symmetric with respect to the *y*-axis, then the graph of $y = g(x)$ will be symmetric with respect to the *y*-axis as well. So, for free (since we are all Math D experts), we know that $b = 0$. If you have a graphing calculator, sketch the graphs of both $y = f(x)$ and $y = g(x)$ on the same coordinate axis system after you have found the values for these constants. In arriving at these values, find the exact values prior to approximating.