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Math 112C: Quiz 6

(10) **1.** Let $g(z), h(z)$ be entire functions that do not share zeros. Suppose $f(z) = \frac{g(z)}{h(z)}$, and $h(z)$ has a double zero at z_1 . Find $\text{Res } f(z_1)$, in terms of $g(z)$, $h(z)$ and their derivatives.