Problem statement Suppose $g(t) = Q(t^3, t^5)$. Suppose you also know that

$$Q(1, 1) = A; \ Q_x(1, 1) = B; \ Q_y = C; \ Q_{xx}(1, 1) = D; \ Q_{xy}(1, 1) = E; \ Q_{yy}(1, 1) = F$$

where the subscripts indicate partial derivatives. Compute the quantities $g(1)$, $g'(1)$, and $g''(1)$ in terms of $A$, $B$, $C$, $D$, and $E$. 