Chain rule examples

① Evaluate $\dfrac{d}{dx}\left[(2x+1)^7\right]$

② Evaluate $\dfrac{d}{dx}\sec\left(\tfrac{1}{x}\right)$

③ Evaluate $\dfrac{d}{dx}\tan\left(\dfrac{1}{x^2+1}\right)$

④ Evaluate $\dfrac{d}{dx}\left[(\sin\sqrt{x})^5\right]$

⑤ Evaluate $(f\circ g)'(2)$, given the following data about f, g, and their derivatives.

X	0	1	2	3
f(x)	10	7	2	-5
f'(x)	-2	-4	-6	-8
g(x)	1	0	0	2
g'(x)	-2	-1	1	3