34. If $|x| \leq 1$, then $2 \tan^{-1} x + \sin^{-1} \dfrac{2x}{1+x^2}$ is equal to

(a) $4 \tan^{-1} x$ (b) 0   (c) $\dfrac{\pi}{2}$ (d) π

Sol. (a) We have, $2 \tan^{-1} x + \sin^{-1} \dfrac{2x}{1+x^2}$ $\left(\because 2 \tan^{-1} x = \sin^{-1} \dfrac{2x}{1+x^2} \right)$

$$= 2 \tan^{-1} x + 2 \tan^{-1} x = 4 \tan^{-1} x$$