

$$\textcircled{13} \quad \frac{(x^2+1)(1) - (x+1)(2x)}{(x^2+1)^2}$$

$$\frac{x^2+1 - (2x^2+2x)}{D_1} = \frac{-x^2 - 2x + 1}{D_1} \quad \textcircled{C}$$

$$\begin{aligned} s\left(\frac{\pi}{2}\right) &= 4 + \int_0^{\pi/2} v(t) dt \\ &= 4 + \int_0^{\pi/2} \sin(2t) dt \\ &= 4 - \frac{1}{2} \cos 2t \Big|_0^{\pi/2} = 4 - \frac{1}{2} (\cos \pi - \cos 0) \\ &= 4 - \frac{1}{2} (-1 - 1) = 5 \end{aligned}$$

(D)