Tarefa de Integração Numérica

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Tarefa 06 : Seguindo o desenvolvimento apresentado nesta aula, complete a linha n=4 da tabela. Em seguida, implemente as Quadraturas especiais para n=2, 3 e 4.

a) Tabela

n	$h_n(x)$		$L_n(x)$	
	X_k	w_k	X_k	w_k
2	$-\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$	$\frac{\sqrt{\pi}}{2}, \frac{\sqrt{\pi}}{2}$	$2-\sqrt{2}, 2+\sqrt{2}$	$\frac{1}{4}(2+\sqrt{2}), \frac{1}{4}(2-\sqrt{2})$
3	$-\frac{3}{\sqrt{2}}, 0, \frac{3}{\sqrt{2}}$	$\frac{\sqrt{\pi}}{6}, \frac{\sqrt{2\pi}}{3}, \frac{\sqrt{\pi}}{6}$	$0.4157, 2.2942, 6.2899$	$0.7110, 0.2785, 0.0103$
4	$-2.3344, -0.7415, 0.7415, 2.3344$	$0.2954, 1.1615, 1.1615, 0.2954$	$0.1293, 0.7010, 1.7587, 3.6311$	$0.3627, 0.3992, 0.1959, 0.0422$

n	$T_n(x)$	
	X_k	w_k
2	$-\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$	$\frac{\pi}{2}, \frac{\pi}{2}, \frac{\pi}{2}$
3	$-\frac{3}{\sqrt{2}}, 0, \frac{3}{\sqrt{2}}$	$\frac{\pi}{3}, \frac{\pi}{3}, \frac{\pi}{3}$
4	$-1, -0.5000, 0.5000, 1$	$0.7854, 0.7854, 0.7854, 0.7854$