Solution of Laplace's Equation on Square plate $0^{\circ} \mathrm{C}$


The formula for the temperature distribution on a $\pi$ by $\pi \mathrm{cm}^{2}$ metal plate which is 100 degrees on one side and 0 degrees on the other three sides is:

$$
u(x, y)=\sum_{n-\text { odd }} \frac{400}{n \pi} \frac{\sin (n y) \sinh (n(\pi-x))}{\sinh (n \pi)}
$$


sum of 1st two terms of series

## FULL SOLUTION:



