

Week 16 Summary:

- Solving the 2D heat & wave eqns.

Assume $u(x, y, t) = f(x, y) g(t)$, & separate variables.

Get the Helmholtz eq'n for f : $\nabla^2 f = \lambda f$, $\lambda = -(n^2 + m^2)$

The solution has the form $\sum_{n=1}^{\infty} \sum_{m=1}^{\infty} U_{nm}(x, y, t)$.

Add this to the steady-state sol'n (heat eq'n only).