Problem 27

In each of Problems 25 through 28, verify that each given function is a solution of the given partial differential equation.

$$a^2 u_{xx} = u_{tt}; \qquad u_1(x,t) = \sin\lambda x \sin\lambda at, \quad u_2(x,t) = \sin(x - at), \quad \lambda \text{ a real constant}$$