

$$\frac{T_i^{n+1} - T_i^n}{\Delta t} = \alpha \frac{T_{i+1}^{n+1} - 2T_i^{n+1} + T_{i-1}^{n+1}}{\Delta x^2}$$

$$\frac{T_i^{n+1} - T_i^n}{\Delta t} = \alpha \frac{-T_{i+2}^{n+1} + 16T_{i+1}^{n+1} - 30T_i^{n+1} + 16T_{i-1}^{n+1} - T_{i-2}^{n+1}}{12\Delta x^2}$$

Error in Lecture (at 23:28 mark): The denominator of the RHS was missing a coefficient of 12. Hat-tip to João Pedro Rocha for catching this.