$$u_i^{n+1} = u_i^n - u_i^n\left(\frac{dt}{dx}\right)(u_i^n - u_{i-1}^n) + v\left(dt/(dx)^2\right) * \cancel{(u(n, i+1}$$

$$* \; u_i^n + u_{i-1}^n$$

$$\frac{\partial u}{dt} + u\frac{\partial u}{\partial x} = v\frac{\partial^2 u}{\partial x^2}.$$

$$\frac{\partial u}{\partial t} + u\frac{\partial u}{\partial x} = v\frac{\partial^2 u}{\partial x^2}$$

$$u_i^{n+1} - u_i^n + u_i^n\left(\frac{dt}{dx}\right)\left(u_i^n - u_{i-1}^n\right) = v\frac{dt}{(dx)^2}$$

$$u_i^{n+1} = u_i^n + dt\left(D\frac{u_{i+1}^n - 2u_i^n + u_{i-1}^n}{\Delta x^2} - u_i^n(u_i^n - a)\right.$$

$$(1 - u_i^n) + w_i^n$$

$$\frac{u_i^{n+1} - u_i^n}{\Delta t} + u_i^n\frac{u_i^n - u_{i-1}^n}{\Delta x} = \frac{u_{i+1}^n - 2u_i^n + u_{i-1}^n}{\Delta x^2}$$