$$\frac{\partial u}{\partial x}+\frac{\partial v}{\partial y}+\frac{\partial w}{\partial z}=0$$

$$\Delta y\Delta z\left(u^{n+1}_{i+1/2,j,k}-u^{n+1}_{i-1/2,j,k}\right)+\Delta x\Delta z\left(u^{n+1}_{i,j+1/2,k}-u^{n+1}_{i,j-1/2,k}\right)+\Delta x\Delta y\left(u^{n+1}_{i,j,k+1/2}-u^{n+1}_{i,j,k-1/2}\right)=0.$$

$$\frac{\partial u}{\partial t}+\frac{\partial}{\partial x}\left(u^2-\frac{1}{Re}\frac{\partial u}{\partial x}\right)+\frac{\partial}{\partial y}\left(uv-\frac{1}{Re}\frac{\partial u}{\partial y}\right)+\frac{\partial}{\partial z}\left(uw-\frac{1}{Re}\frac{\partial u}{\partial z}\right)=0.$$

$$\frac{\partial u}{\partial t}=\frac{u^{n+1}_{i+1/2,j,k}-u^{n}_{i+1/2,j,k}}{\Delta t}$$

$$\frac{\partial}{\partial x}\left(u^2-\frac{1}{Re}\frac{\partial u}{\partial x}\right)=\frac{F^{(1)}_{i+1/2,j,k}-F^{(1)}_{i-1/2,j,k}}{\Delta x}=\frac{u^{n}_{i+1/2,j,k}u^{n+1}_{i+1/2,j,k}}{\Delta x}-\frac{1}{Re}\frac{u^{n+1}_{i+1,j,k}+u^{n+1}_{i-1,j,k}-2u^{n+1}_{i,j,k}}{\Delta x^2}$$

$$\frac{\partial}{\partial y}\left(uv-\frac{1}{Re}\frac{\partial u}{\partial y}\right)=\frac{G^{(1)}_{i,j+1/2,k}-G^{(1)}_{i,j-1/2,k}}{\Delta y}=\frac{}{\Delta y}$$

$$\frac{\partial}{\partial y}\left(uv-\frac{1}{Re}\frac{\partial u}{\partial y}\right)\approx\frac{1}{\Delta y}\left[\left(u_{i+\frac{1}{2},j+\frac{1}{2},k}\cdot v_{i,j+\frac{1}{2},k}-\frac{1}{Re}\cdot\frac{u_{i+\frac{1}{2},j+1,k}-u_{i+\frac{1}{2},j,k}}{\Delta y}\right)-\left(u_{i+\frac{1}{2},j-\frac{1}{2},k}\cdot v_{i,j-\frac{1}{2},k}-\frac{1}{Re}\cdot\frac{u_{i+\frac{1}{2},j,k}-u_{i+\frac{1}{2},j-1,k}}{\Delta y}\right)\right].$$