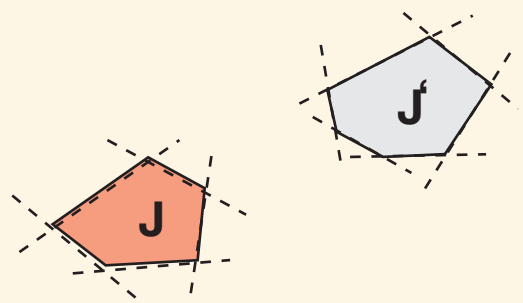
MULTI-POINT FORWARD BACKWARD SCHEME FOR NONLINEAR SHALLOW-WATER EQUATIONS APPLIED TO AN IRREGULAR GRID

$$\frac{\partial H}{\partial T} = -\nabla \cdot \left(\overline{H\mathbf{V}}\right)$$

$$\frac{\partial \mathbf{V}}{\partial T} = -\nabla \overline{\left(\mathbf{V}^2 / 2 + Gh\right)}$$



- We borrow the coefficients obtained from the linearized equations.
- The averaging, however should be applied inside the ∇ operator to guartantee mass conservation and the irrotationality of gradient vector.