

C++ code 11.6.19: Implementation of right-hand side of the method-of-lines ODE → [GitLab](#)

```
2 template <typename FUNCTOR>
3 Eigen::VectorXd semiDiscreteRhs(const Eigen::VectorXd &mu0, double h,
4                                FUNCTOR &&numFlux) {
5     int m = mu0.size();
6     Eigen::VectorXd mu1(m);
7     mu1(0) = -1.0 / h * (numFlux(mu0(0), mu0(1)) - numFlux(mu0(0), mu0(0)));
8     for (int j = 1; j < m - 1; ++j) {
9         mu1(j) =
10             -1.0 / h * (numFlux(mu0(j), mu0(j + 1)) - numFlux(mu0(j - 1), mu0(j)));
11     }
12     mu1(m - 1) =
13         -1.0 / h *
14         (numFlux(mu0(m - 1), mu0(m - 1)) - numFlux(mu0(m - 2), mu0(m - 1)));
15     return mu1;
16 }
```