

H.W.

编程实现用Richardson外推计算 $f'(x)$ 的值, $h = 1$ 。函数 $f(x)$ 分别取

- $\ln x, x = 3, M = 3$
- $\tan x, x = \sin^{-1}(0.8), M = 4$
- $\sin(x^2 + \frac{1}{3}x), x = 0, M = 5.$

输出相应的三角阵列

$$\begin{array}{ccccccc} D(0,0) & & & & & & \\ D(1,0) & D(1,1) & & & & & \\ D(2,0) & D(2,1) & D(2,2) & & & & \\ \vdots & \vdots & \vdots & \ddots & & & \\ D(M,0) & D(M,1) & D(M,2) & \cdots & D(M,M) & & \end{array}$$