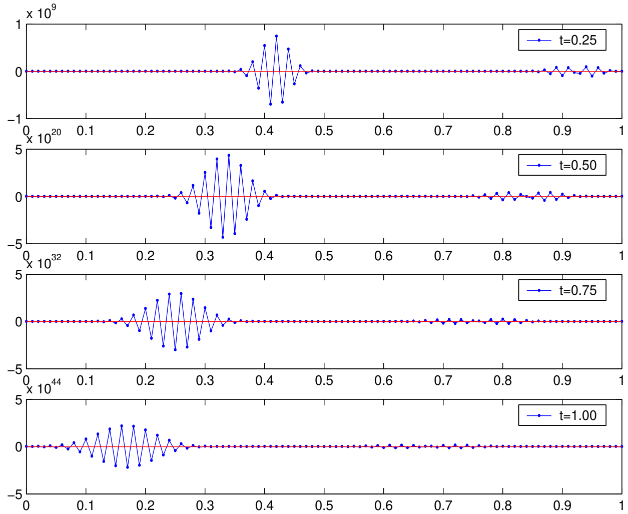
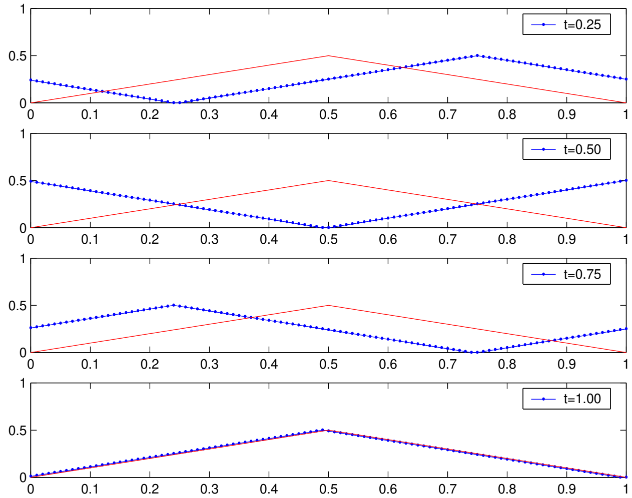
Example A, $a = 1$

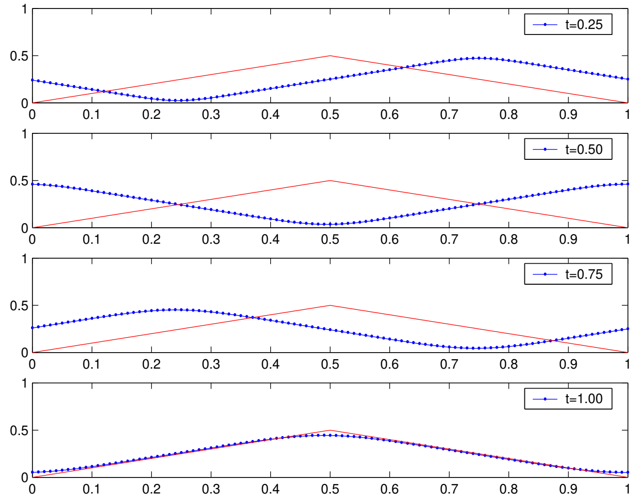
$CFL = 1$ $\qquad$ $CFL = 0.5$

Upward

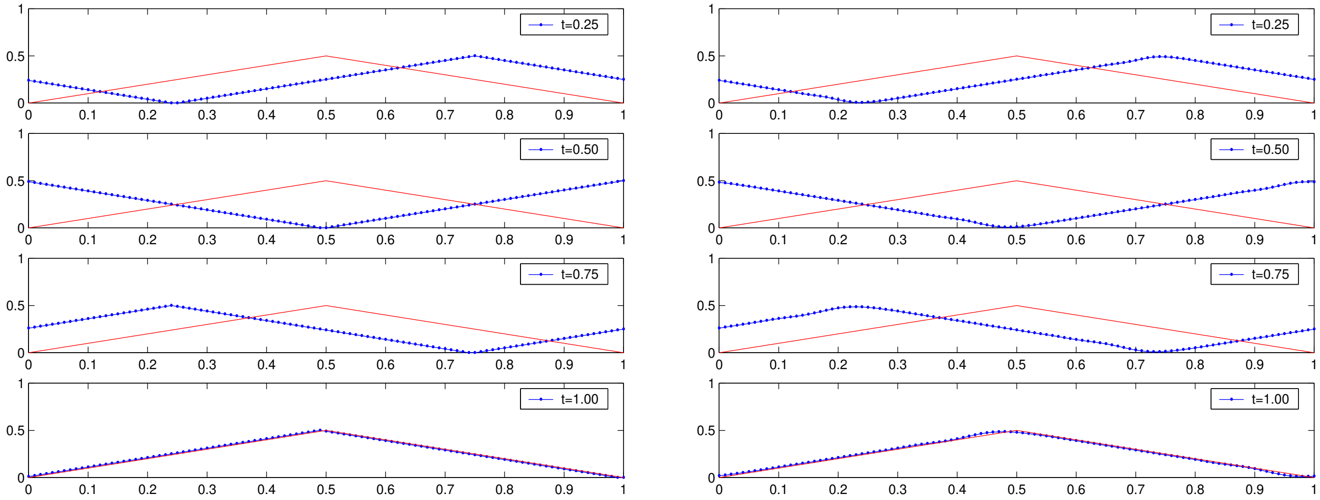


Downward

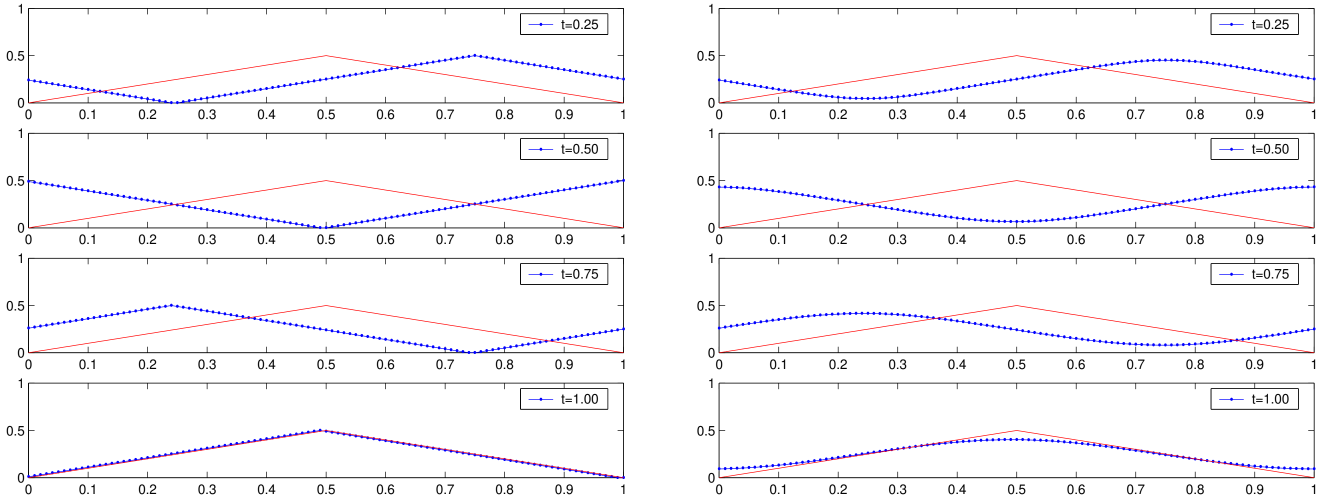




$CFL = 1$ $CFL = 0.5$



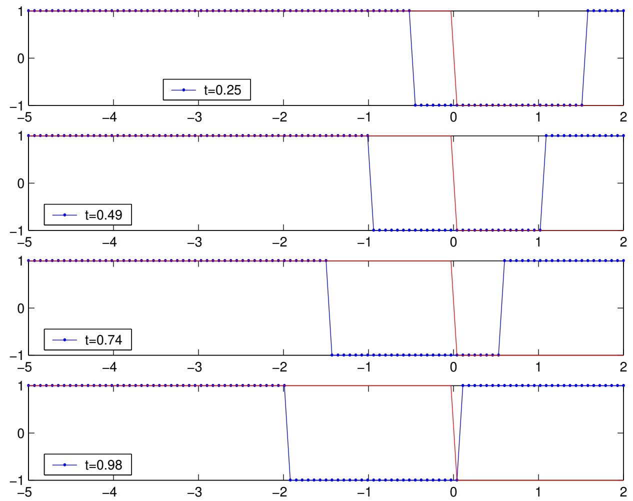
Lax–Wendroff

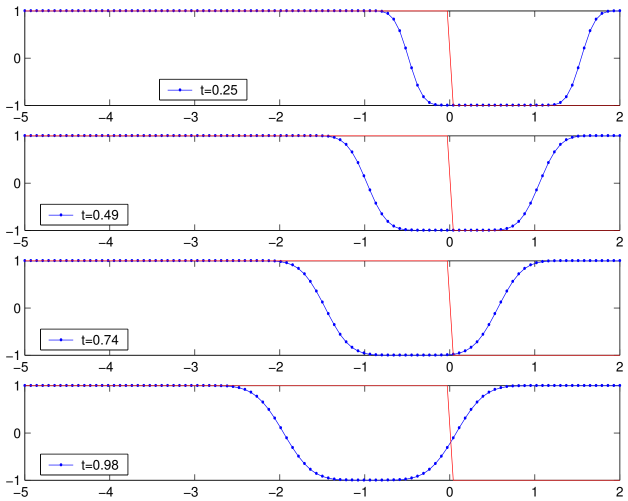


Lax–Friedrich

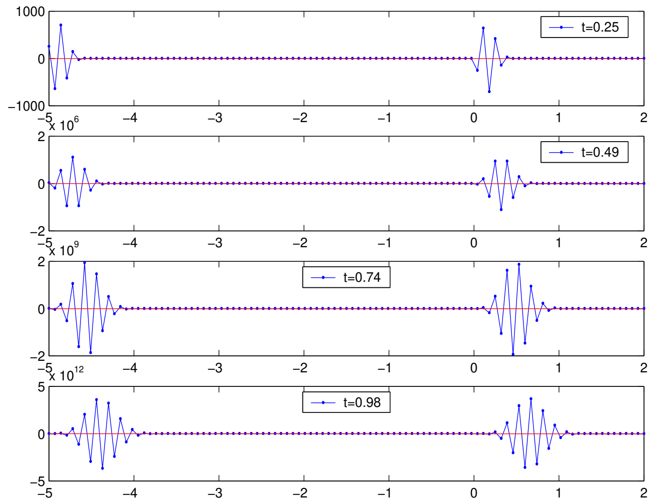
Example B, $a = -2$

$CFL = 1$ | $CFL = 0.5$

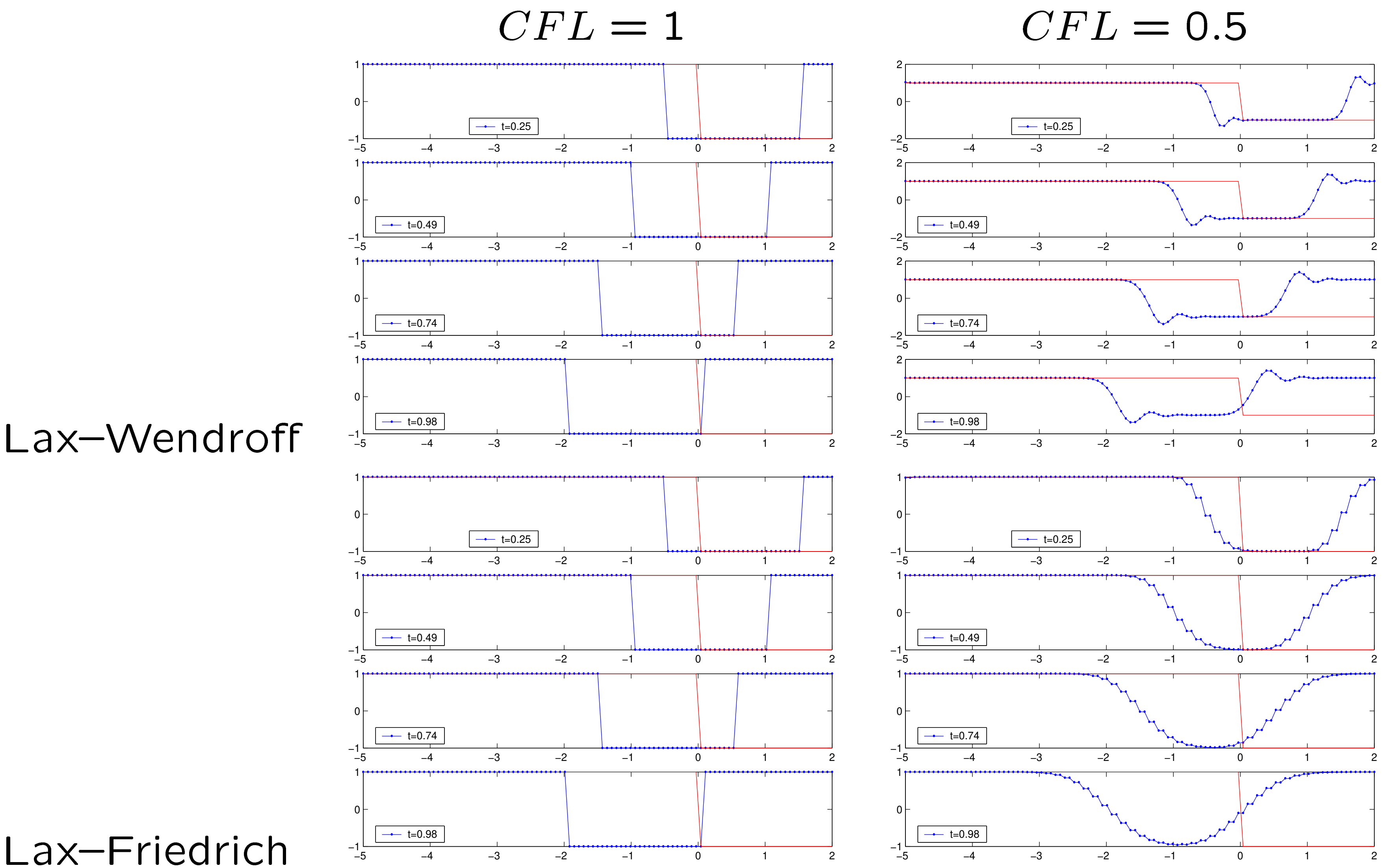




Upward



Downward



$CFL = 1$
$CFL = 0.5$
Lax–Wendroff
Lax–Friedrich
t=0.25
t=0.49
t=0.74
t=0.98