|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Explicit Upwind FTBS | | | Implicit Upwind FTBS | | | Lax-Wendroff | | | Implicit FTCS | | |
| Time Interval | L0 | L1 | L2 | L0 | L1 | L2 | L0 | L1 | L2 | L0 | L1 | L2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.1 | 15.2146 | 1.339069 | 3.404714 | 25.2017 | 3.114377 | 7.125077 | 8.47943 | 0.652061 | 1.838201 | 17.1036 | 1.601748 | 1.442934 |
| 0.2 | 20.5936 | 2.344008 | 5.539235 | 35.2954 | 4.971181 | 10.73369 | 11.5795 | 1.0382 | 2.653446 | 22.6164 | 2.611529 | 1.764581 |
| 0.3 | 23.9564 | 3.173032 | 7.240434 | 44.1044 | 6.300886 | 13.02992 | 14.1604 | 1.389241 | 3.352644 | 26.9718 | 3.421145 | 1.95937 |
| 0.4 | 27.5127 | 3.882142 | 8.637467 | 50.1053 | 7.292326 | 14.61972 | 16.3705 | 1.741981 | 3.968964 | 29.7218 | 4.13131 | 2.043295 |
| 0.5 | 32.0015 | 4.49955 | 9.806251 | 54.5169 | 8.063357 | 15.79353 | 17.8114 | 2.064409 | 4.514994 | 33.2866 | 4.753348 | 2.055603 |

Delta = 0.01

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Explicit Upwind FTBS | | | Implicit Upwind FTBS | | | Lax-Wendroff | | | Implicit FTCS | | |
| Time Interval | L0 | L1 | L2 | L0 | L1 | L2 | L0 | L1 | L2 | L0 | L1 | L2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.1 | 0 | 0 | 0 | 28.4452 | 3.764774 | 8.41237 | 0 | 0 | 0 | 22.4343 | 2.447645 | 5.502433 |
| 0.2 | 0 | 0 | 0 | 41.1881 | 5.830933 | 12.31563 | 0 | 0 | 0 | 29.1367 | 3.95484 | 8.616255 |
| 0.3 | 0 | 0 | 0 | 49.9656 | 7.249982 | 14.61816 | 0 | 0 | 0 | 35.9758 | 5.103875 | 10.83848 |
| 0.4 | 0 | 0 | 0 | 55.6907 | 8.259643 | 16.1369 | 0 | 0 | 0 | 41.7985 | 6.012709 | 12.48792 |
| 0.5 | 0 | 0 | 0 | 59.8044 | 9.02031 | 17.22651 | 0 | 0 | 0 | 46.6065 | 6.808058 | 13.75003 |

Delta = 0.02

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Explicit Upwind FTBS | | | Implicit Upwind FTBS | | | Lax-Wendroff | | | Implicit FTCS | | |
| Time Interval | L0 | L1 | L2 | L0 | L1 | L2 | L0 | L1 | L2 | L0 | L1 | L2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0.1 | 18.4753 | 1.864412 | 4.531127 | 23.2852 | 2.733121 | 6.366238 | 9.31593 | 0.888232 | 2.23391 | 13.671 | 1.227732 | 2.8136 |
| 0.2 | 24.3634 | 3.167636 | 7.23298 | 31.6329 | 4.454834 | 9.75907 | 12.3688 | 1.369653 | 3.205056 | 17.5783 | 1.899788 | 4.125327 |
| 0.3 | 29.8085 | 4.195813 | 9.240862 | 40.3166 | 5.7151 | 12.01557 | 16.3947 | 1.809122 | 4.097344 | 22.7201 | 2.458774 | 5.347359 |
| 0.4 | 35.7651 | 5.038863 | 10.79503 | 46.4135 | 6.680899 | 13.62547 | 18.3322 | 2.291653 | 4.799657 | 24.9032 | 2.981049 | 6.3657 |
| 0.5 | 40.4792 | 5.74541 | 12.03523 | 50.972 | 7.447304 | 14.83756 | 18.6654 | 2.659709 | 5.402615 | 27.0189 | 3.421913 | 7.303781 |

Delta = 0.005