**Exercise in hand tracing**

Hand-trace the binary search algorithm by searching for (a) 1998 (b) 2445 (not in the array) in the following array:

1034, 1876, 1998, 2341, 2445, 2543, 3876

In each case, the trace table should have the following headings:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| l | r | m | found | Comparison |
| 0 | 6 |  | false |  |
| 4 |  | 3 |  | 2445, 2341 |
|  | 4 | 5 |  | 2445, 2543 |
|  |  | 4 | true | 2445, 2445 |

In each case, specify the return value.