**Boundary Element Method Open Source Software in Matlab**

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| File / Module(s) | OkQuadrature.m / OkQuadrature.m |
| Title | A set of tests to verify the quadrature rule input to codes for computing the discrete operators in the boundary element method. |
| Version(Date) and History | **1.** (September 2015). |
| Description | A description of the tests is given in the document [Test problems for the Quadrature Rule for computing the discrete operators for 2D problems](http://www.boundary-element-method.com/tests/Test%20Problems%20for%20the%20quadrature%20rule.pdf) |
| Interface | function [passed]=OkQuadrature(n, w, x, xStar, tolQuad) |
| Web source of code. | [www.boundary-element-method.com/mfiles/OkQuadrature.m](http://www.boundary-element-method.com/mfiles/OkGeometry.m) |
| Web source of this guide | [http://www.boundary-element-method.com//mfiles/OkQuadrature\_m.pdf](http://www.boundary-element-method.com/mfiles/OkGeometry_m.pdf) |
| Web source of the algorithm | Not Applicable |
| Dependent routines | Gaussian quadrature rule: [gl8.m](http://www.numerical-methods.com/mfiles/gl8.m) |
| Test problems or modules tested | [www.boundary-element-method.com/fortran/VQUAD\_TESTS.FOR](http://www.boundary-element-method.com/fortran/VQUAD_TESTS.FOR) |
| Licence | This is ‘open source’; the software may be used and applied within other systems as long as its provenance is appropriately acknowledged. See the [GNU Licence](http://www.gnu.org/licenses/lgpl.txt) for more information or contact [webmaster@boundary-element-method.com](mailto:webmaster@boundary-element-method.com) . |
| Codes that this may be used alongside this one | This code was written as a utility routine for l2lc.m |
| Similar codes that may be of interest | A similar Fortran code is available:  <http://www.boundary-element-method.com/fortran/VQUAD.FOR>  A similar code in Excel VBA is available: OkQuadrature.bas in the file  [www.boundary-element-method.com/Excel\_VBA/VQUAD.xlsm](http://www.boundary-element-method.com/Excel_VBA/OkGeometry2lc.xlsm) |
| Applications | To be included in the file libem2.m on the [www.boundary-element-method.com](http://www.boundary-element-method.com) website |
| Author | [Stephen Kirkup](https://www.researchgate.net/profile/Stephen_Kirkup) |
| References | 1. [Introduction to Matlab/Freemat/Octave/Scilab](http://www.freemat.info)  2[. Fortran Tutorial](http://www.computing.me.uk/fortran77/index.htm)  3. [www.boundary-element-method.com](http://www.boundary-element-method.com)  4. [Numerical Integration (Quadrature)](http://www.numerical-methods.com/numint.htm) |