Higher order finite difference scheme

Sommerfeld condition

# 9 point stencil of the Helmholtz equation

# 2nd order 5 point stencil coefficient

# 4th order 9 point stencil coefficient

# 6th order 9 point stencil coefficient

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| --- | --- | --- | --- |
| *Order* |  |  |  |
| **2nd** |  |  |  |
| **4th** |  |  |  |
| **5th** |  |  |  |

# Bibliography

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| [1] | LeVeque R J., *Finite Difference Methods for Ordinary and Partial Differential Equations*. Philadelphia: Society for Industrial and Applied Mathematics (SIAM), 2007. |

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