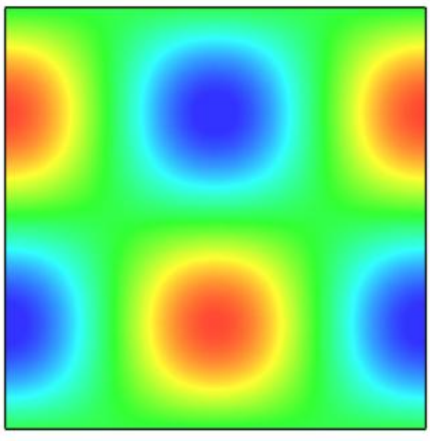
Verification type	Analytical Solutions
Database reference	ANA-10
Topic / Application	Analytical Solution
Physics	Navier-Stokes Equations Incompressible Compressible
Summary	This test case exercises the terms in the Navier-Stokes equations
Description	This reference gives an analytical solution to the Navier-Stokes equations,
Case Title	2D Analytical Solution to Navier-Stokes, via a combination of sin and cosine terms for the velocity and pressure fields. With viscosity set to zero, the test is of the advective discretization and the time integration terms. Solutions with viscosity are also tested. Note that Elsewhere in the document a compressible version of the NS equations is also verified with an analytical solution and is a test of the continuity equation.
Authors	Randall McDermott, Kevin McGrattan, Simo Hostikka, Jason Floyd
Year	2010
Online reference	NIST Special Publication 1018-5
Case image	 Image above shows the velocity field. Belo are the results of the grid convergence study for both viscous and non-viscous cases showing 2nd order accuracy.

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	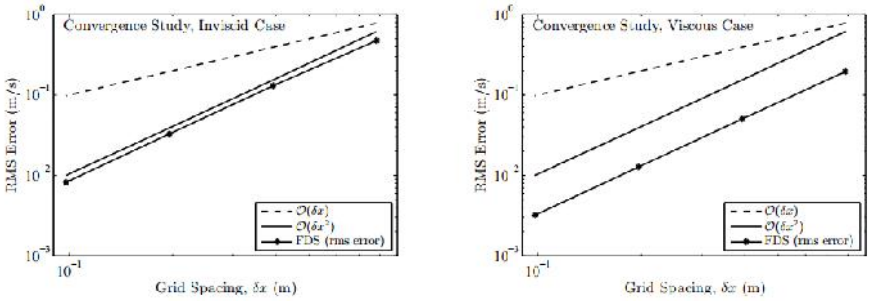
Governing equations	Refer to document.
Results	It is shown that the solutions for both non-viscous and viscous terms are solved to 2nd order accuracy with grid spacing

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