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EOS-288

Coding Assignment 2

1. Crank-Nicholson finite difference solution

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1. Galerkin finite element solution

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1. Comparison
2. Δt = 10 days

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1. Δt = 50 days

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1. It appears that FEM is more accurate for smaller time steps, and FDM is more accurate for the higher velocity.

1. The magnitude of the groundwater velocity has a large effect on the numerical solution. It pushes the concentration distribution farther across the grid and leads to larger errors for the FEM.