

# Advection

François Dubois\*

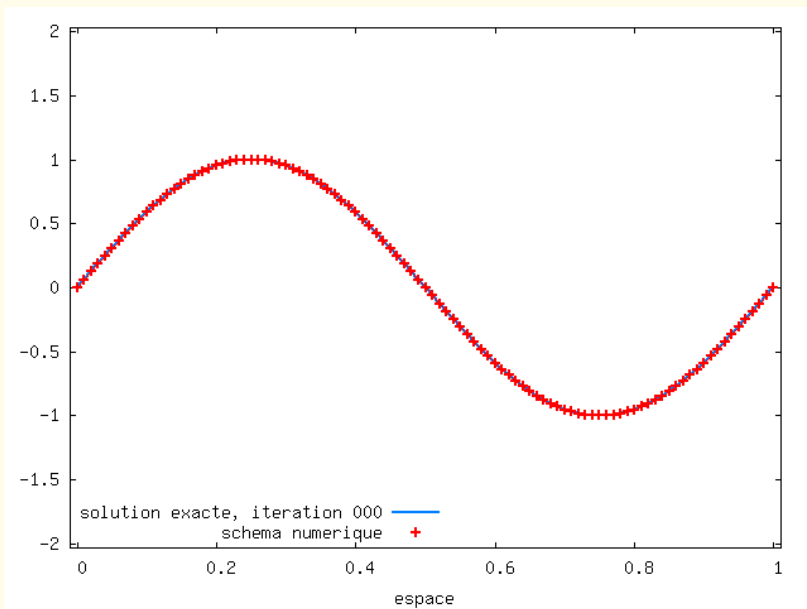
**Introduction à l'Analyse Numérique  
des Equations aux Dérivées Partielles  
Cours 3, 06 avril 2017**

**CNAM Saint-Denis, ingénieurs en aérodynamique**

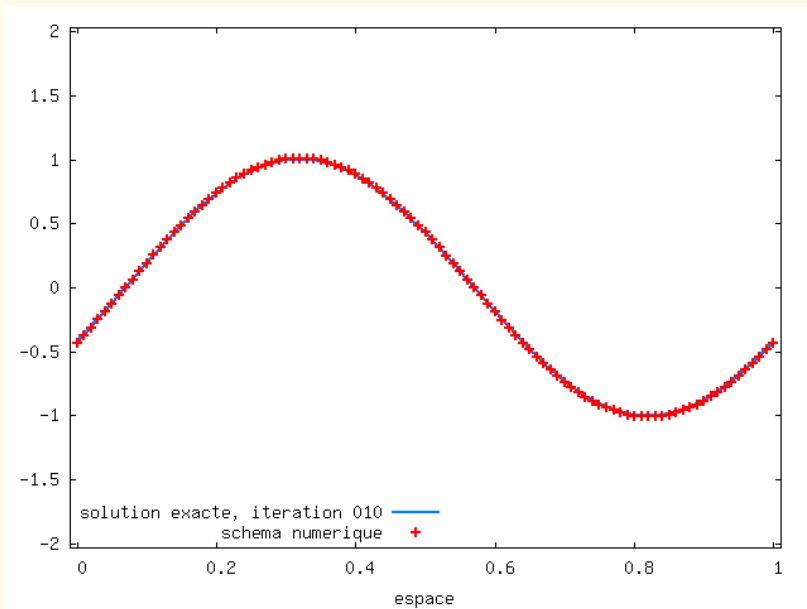
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\* Conservatoire National des Arts et Métiers, Paris

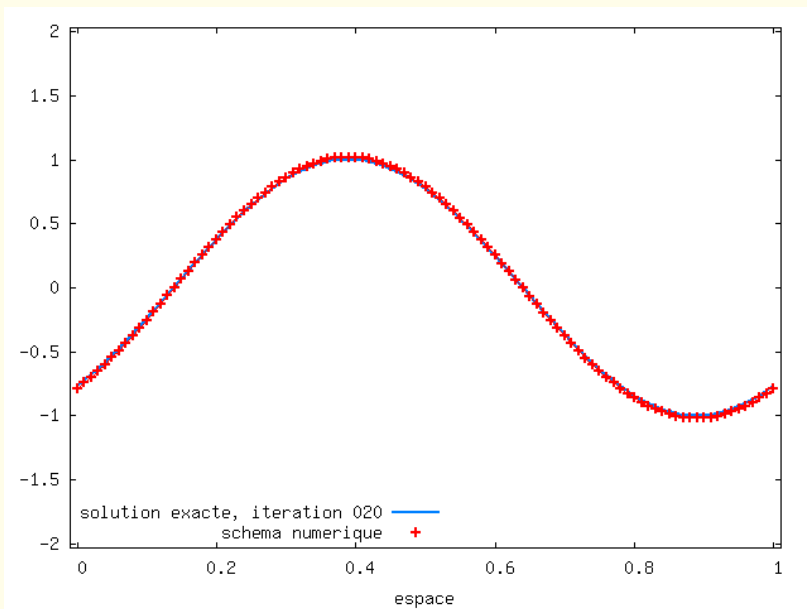
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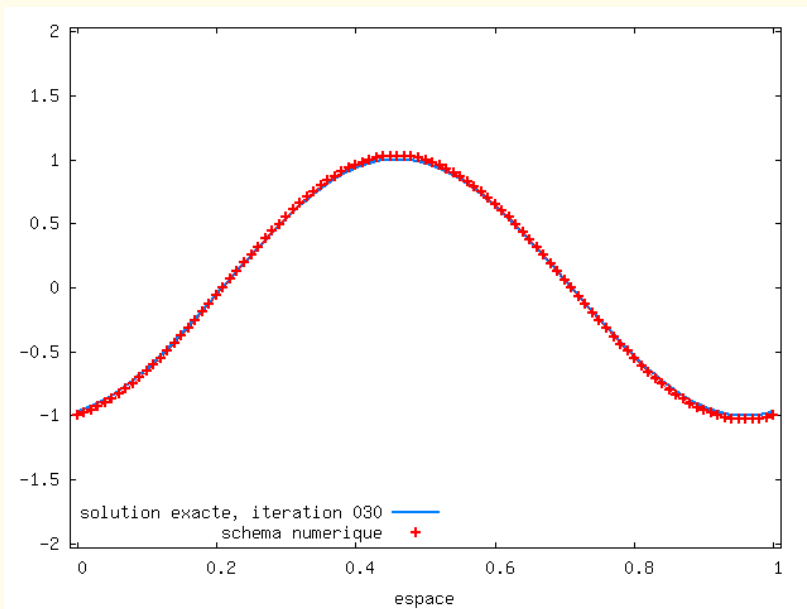
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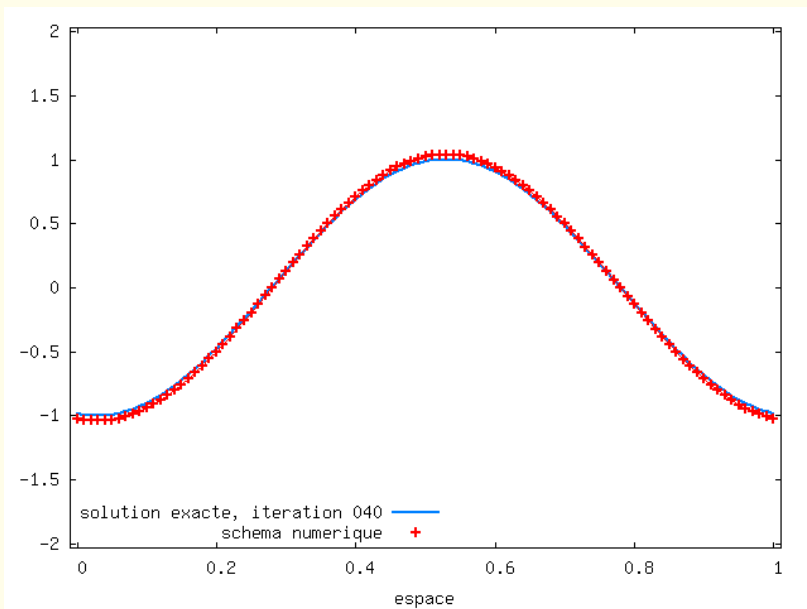
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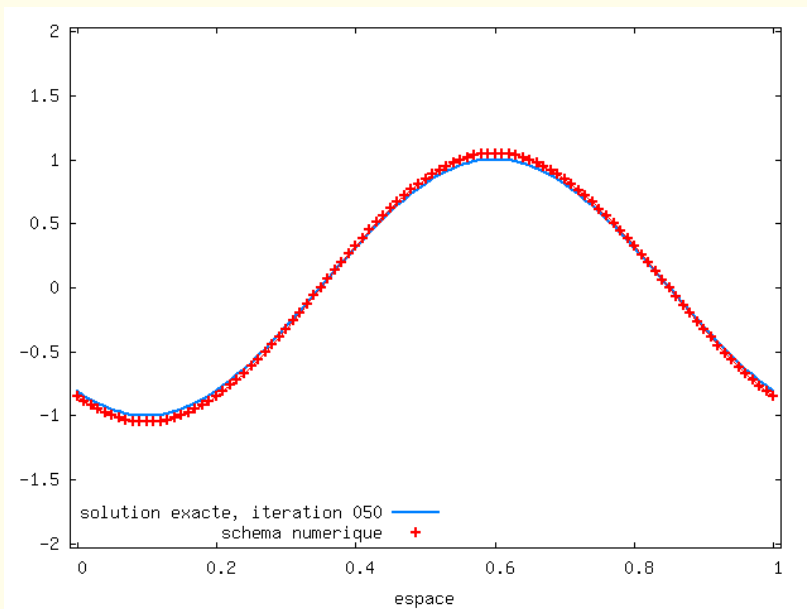
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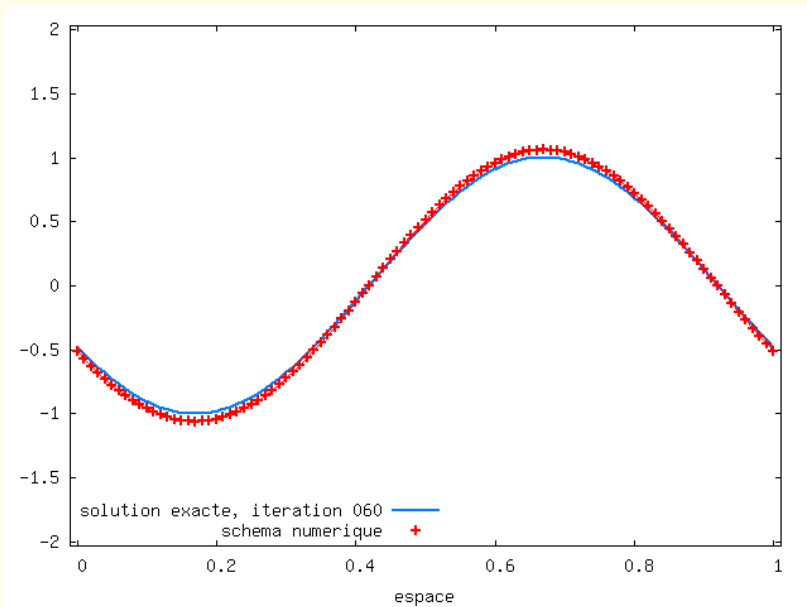
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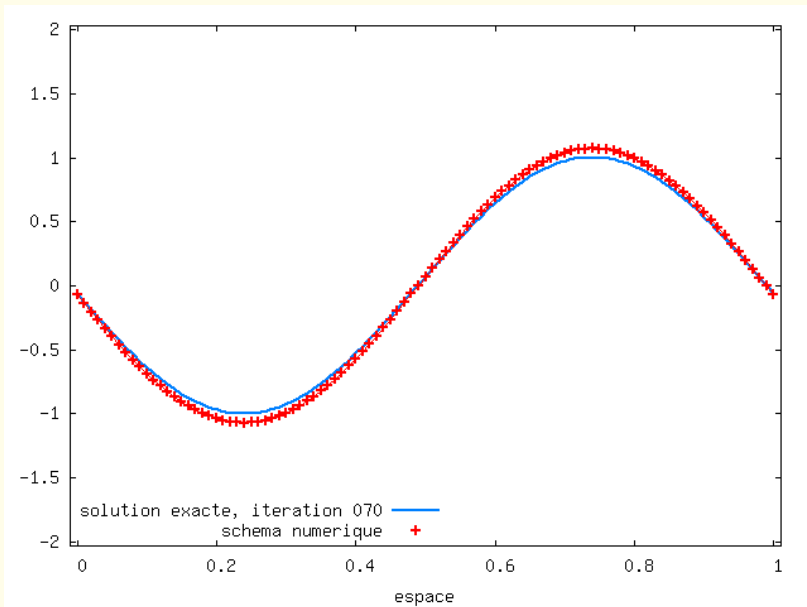


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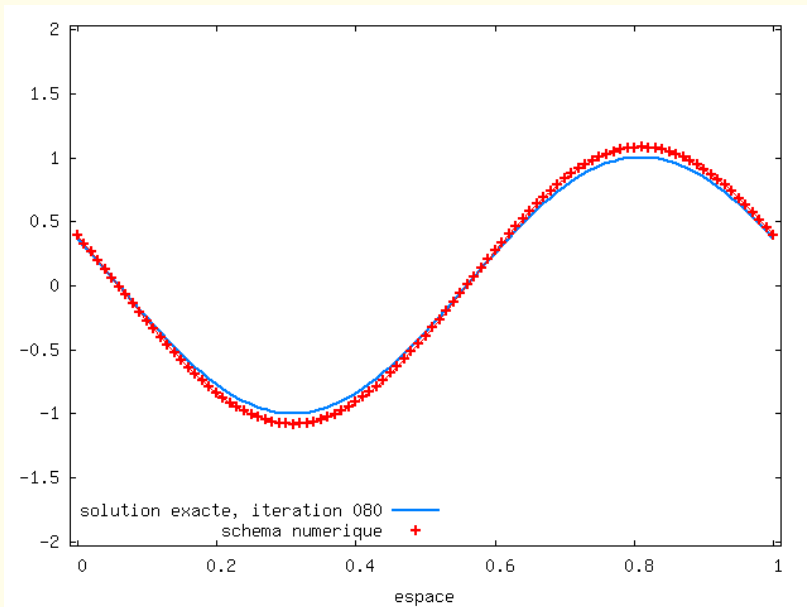




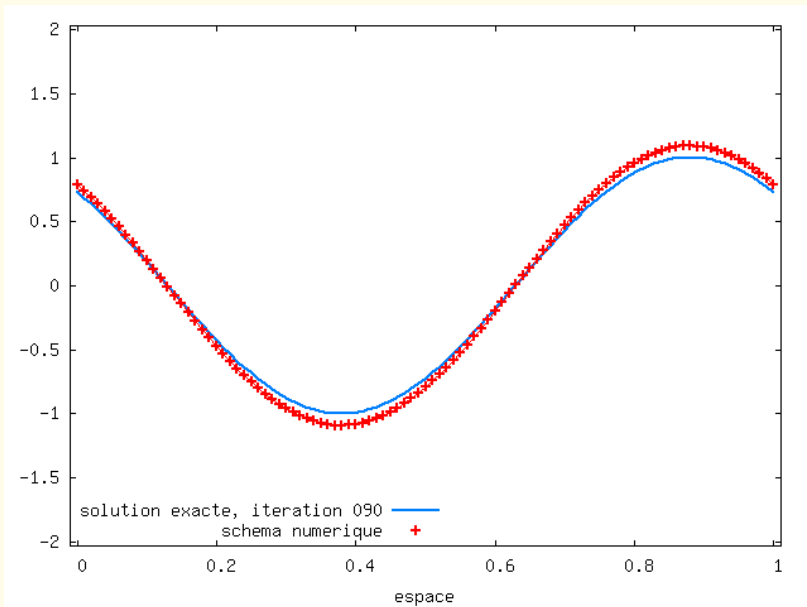
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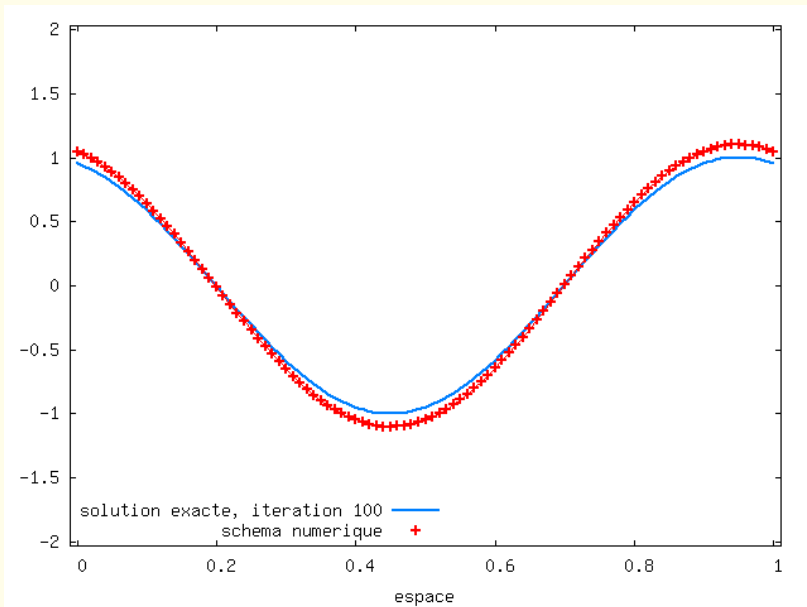
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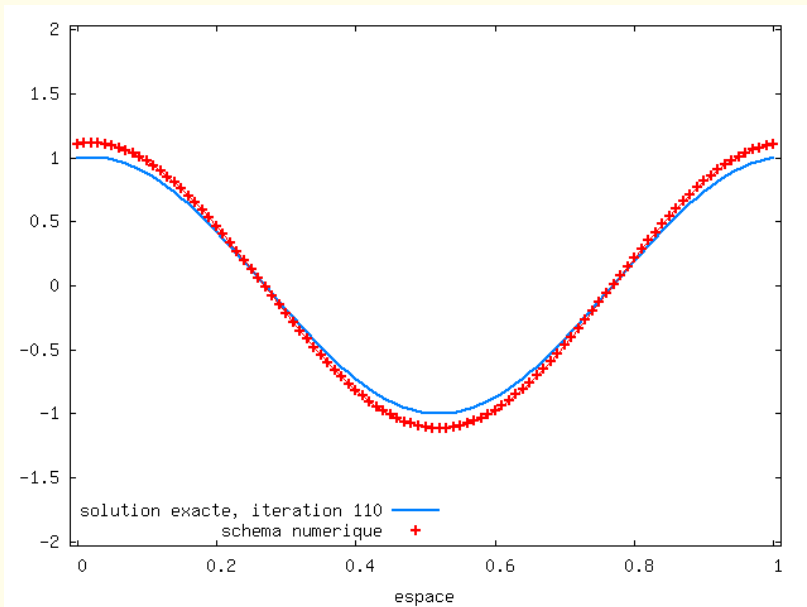
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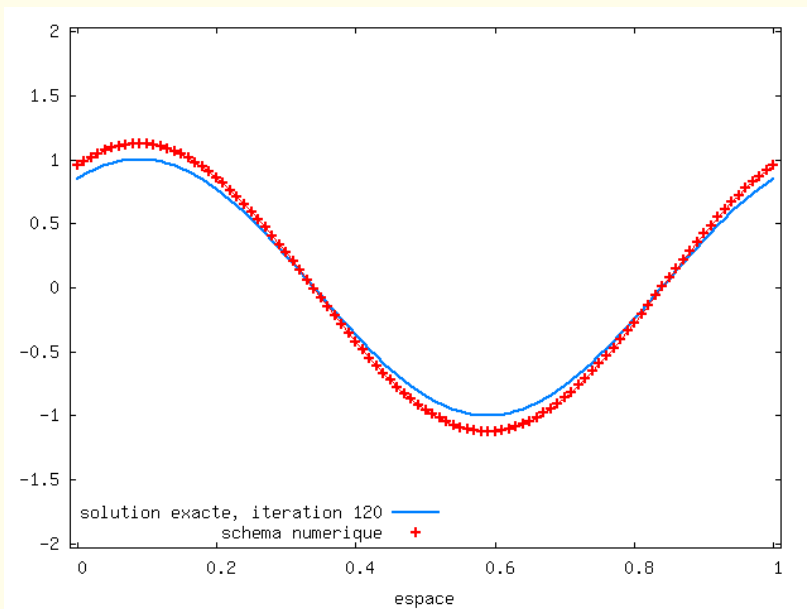
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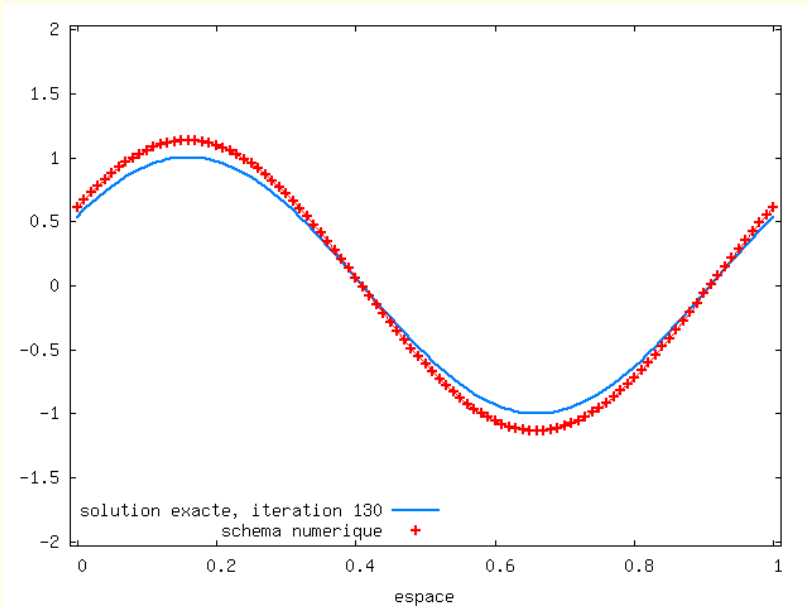
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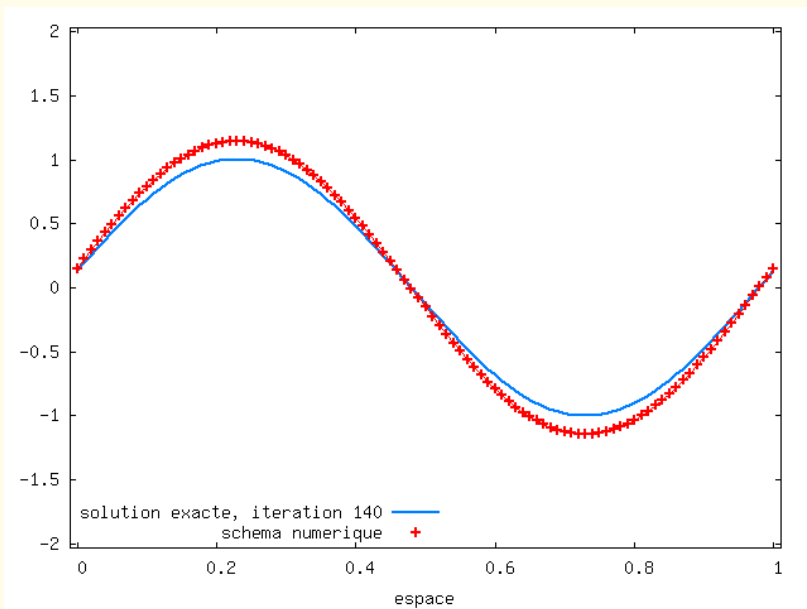
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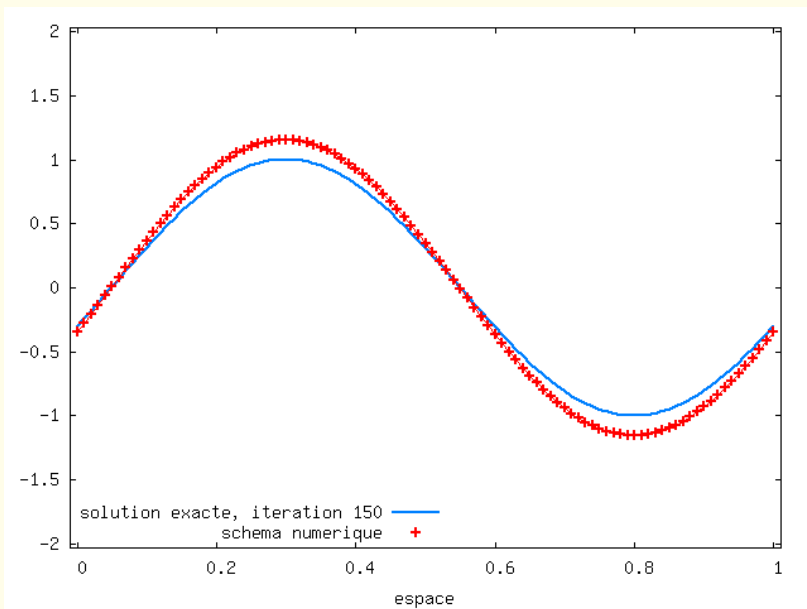


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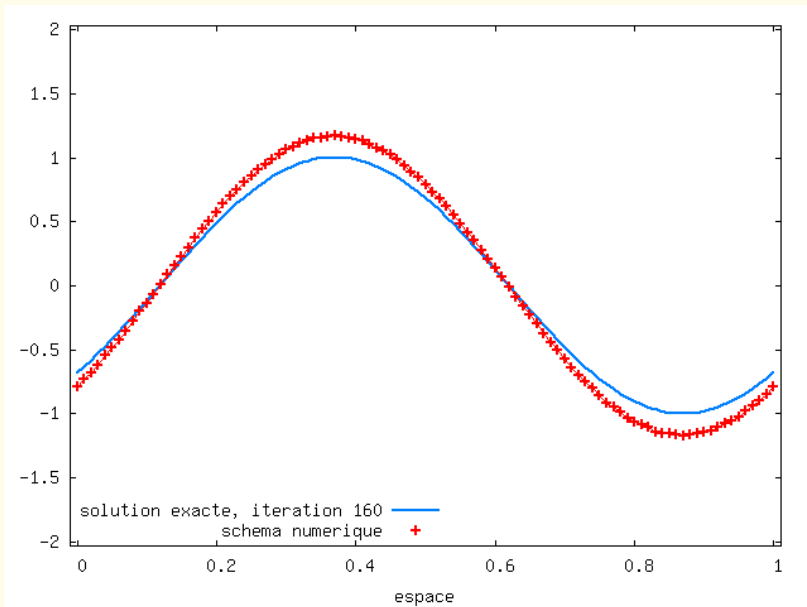




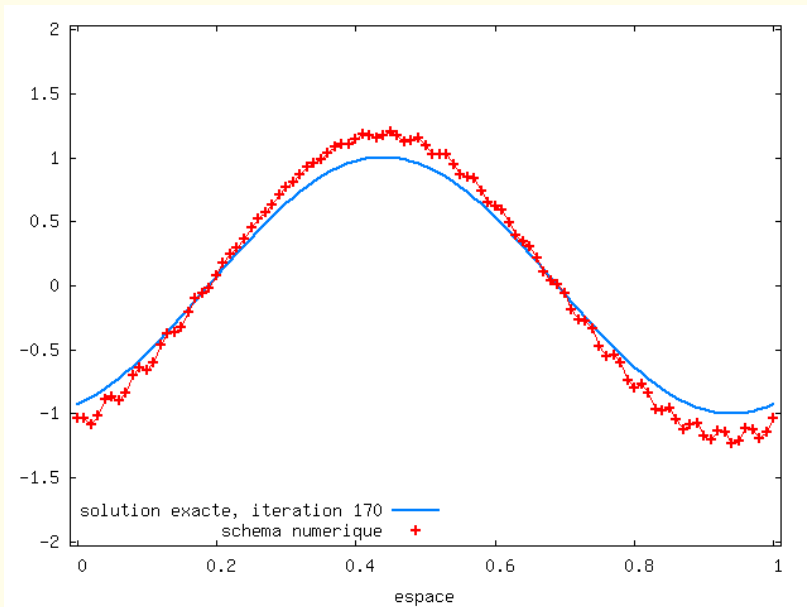
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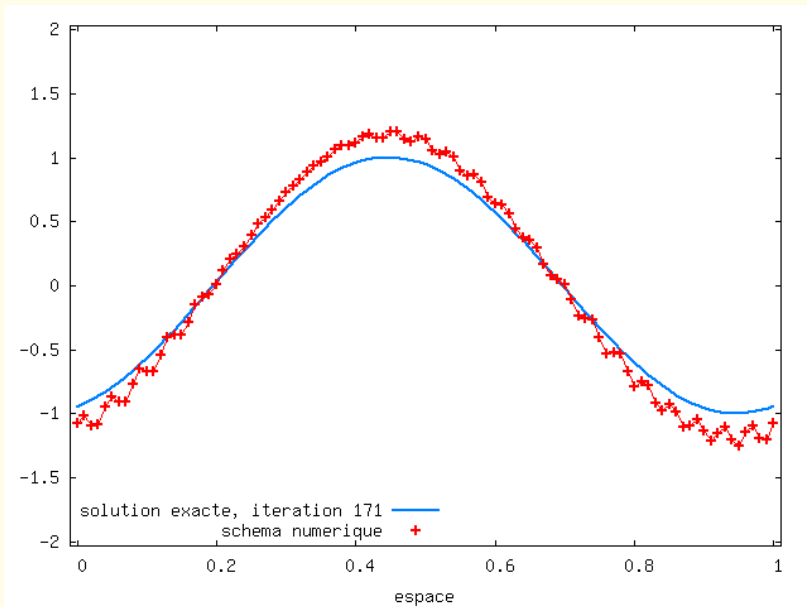
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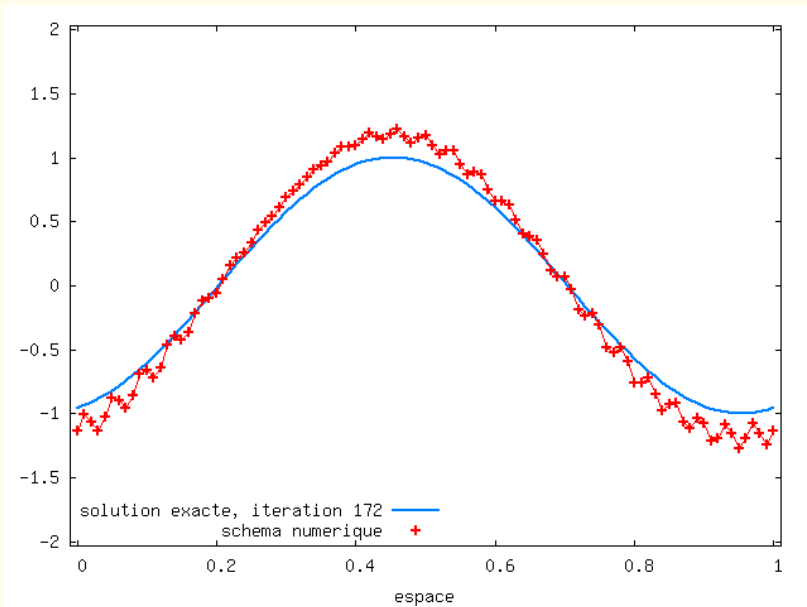
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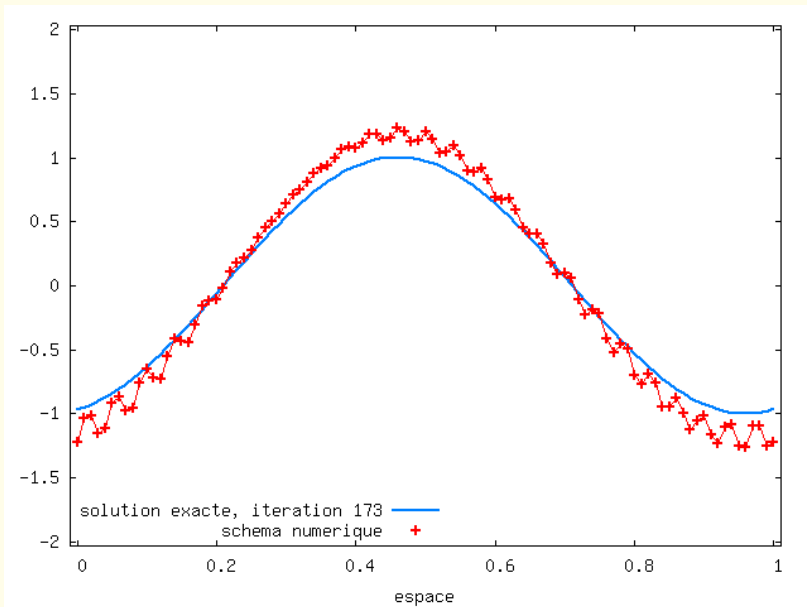
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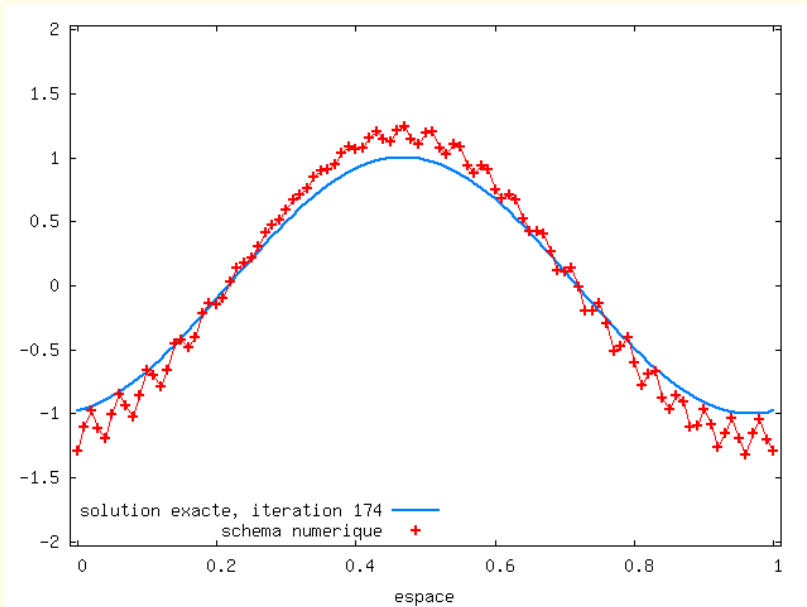
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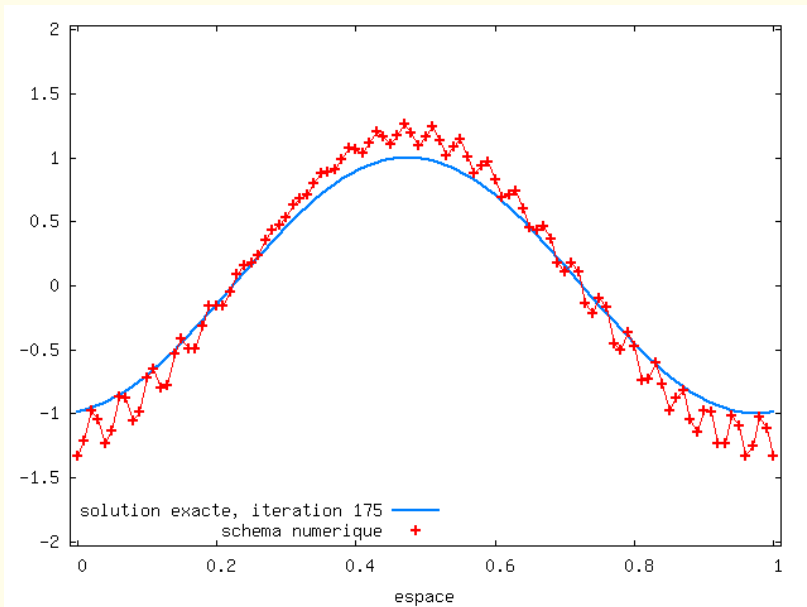
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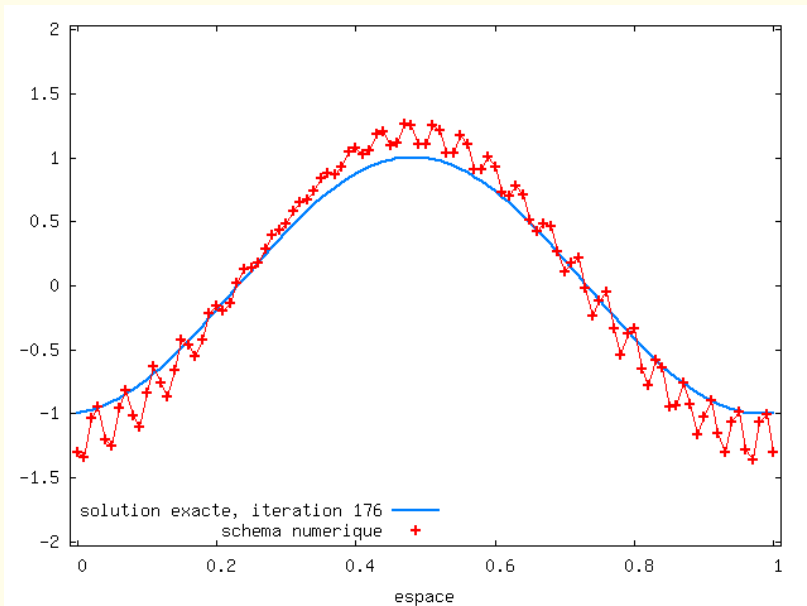


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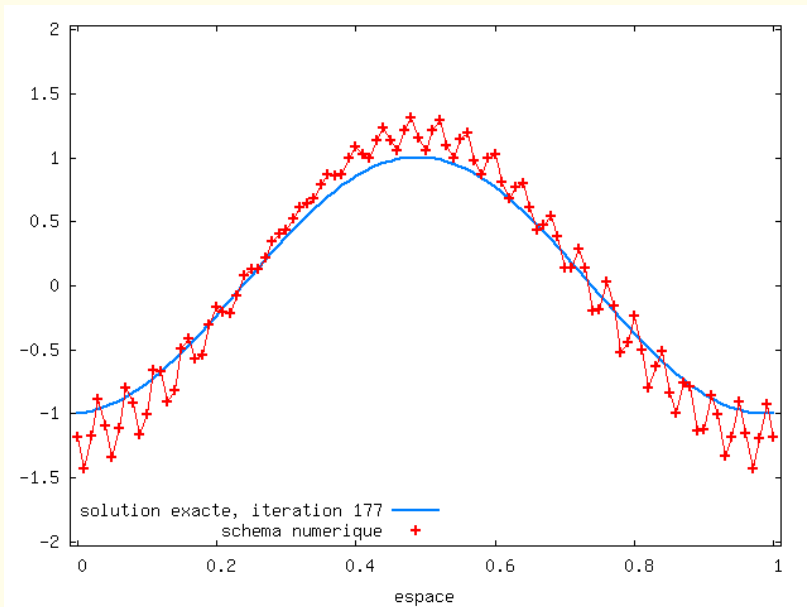




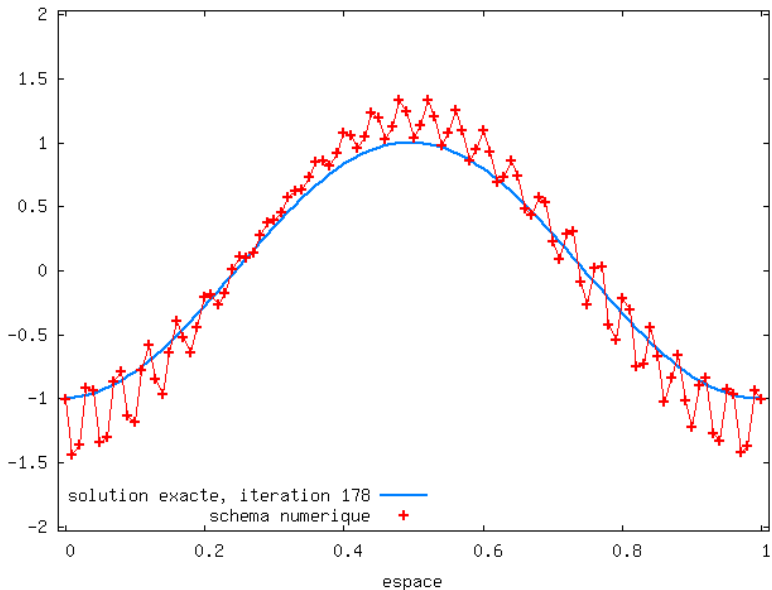
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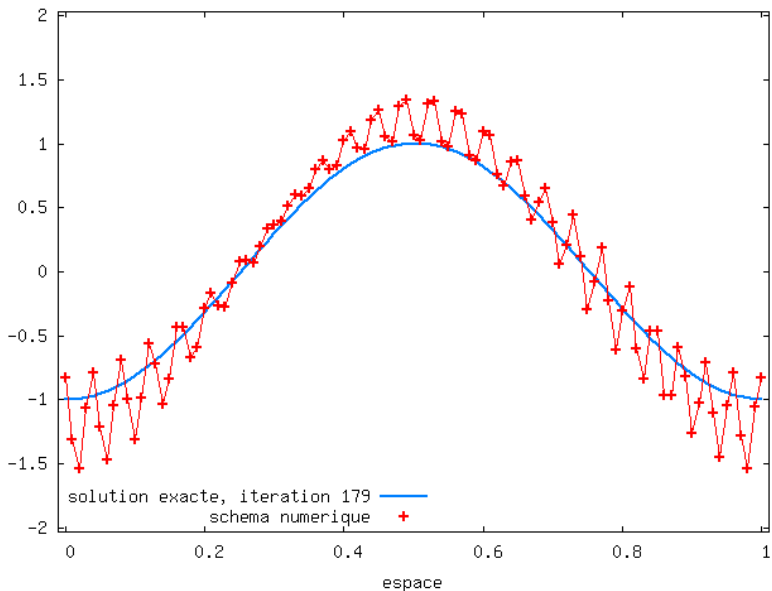
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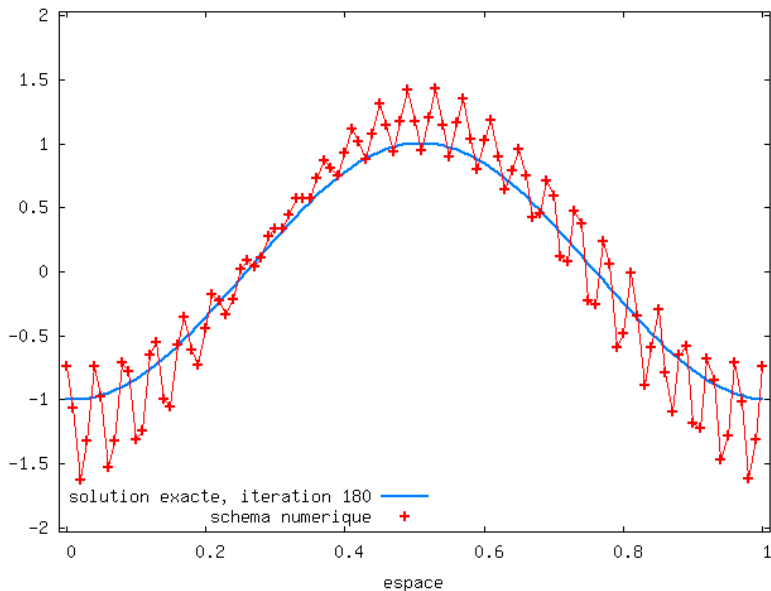
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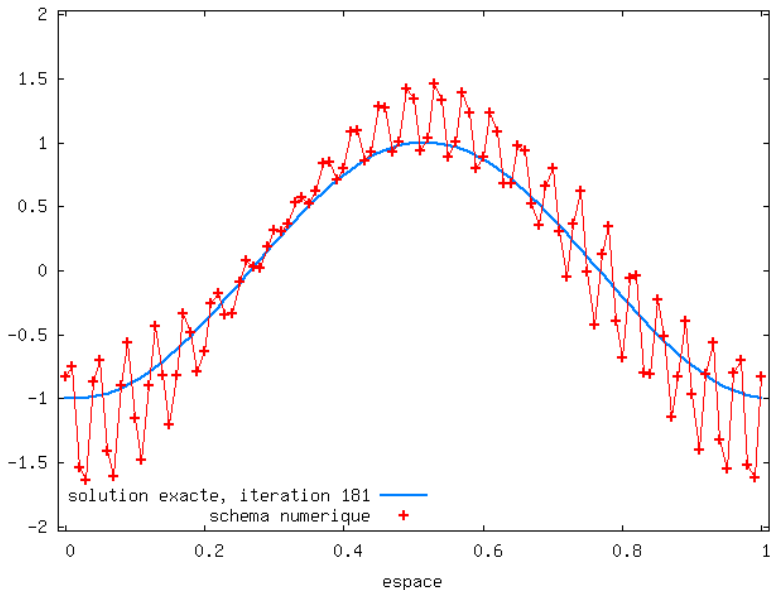
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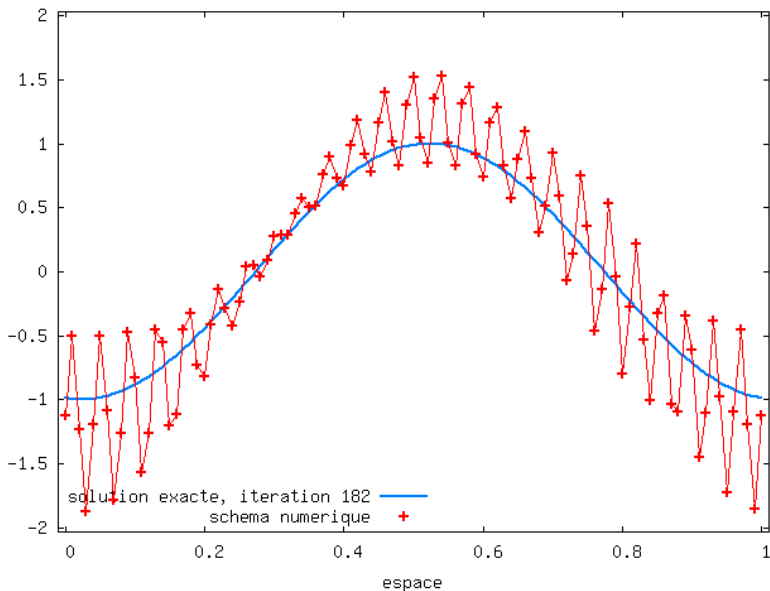
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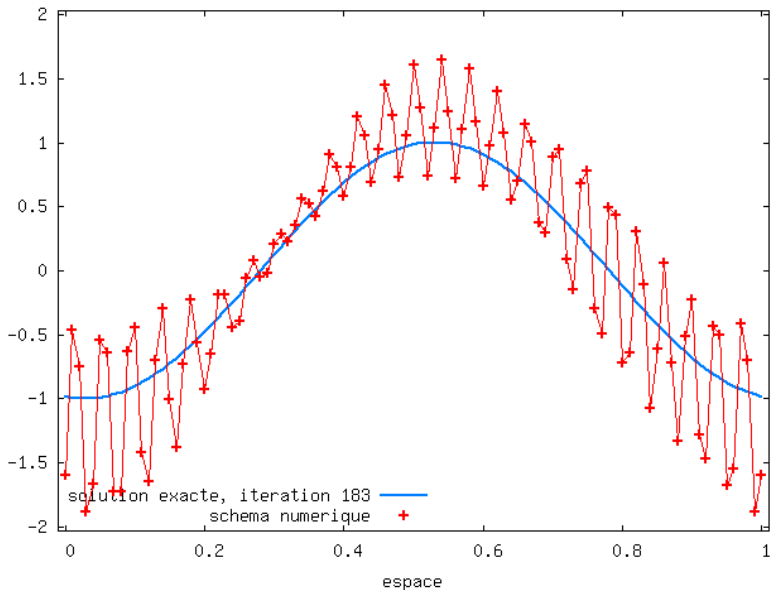
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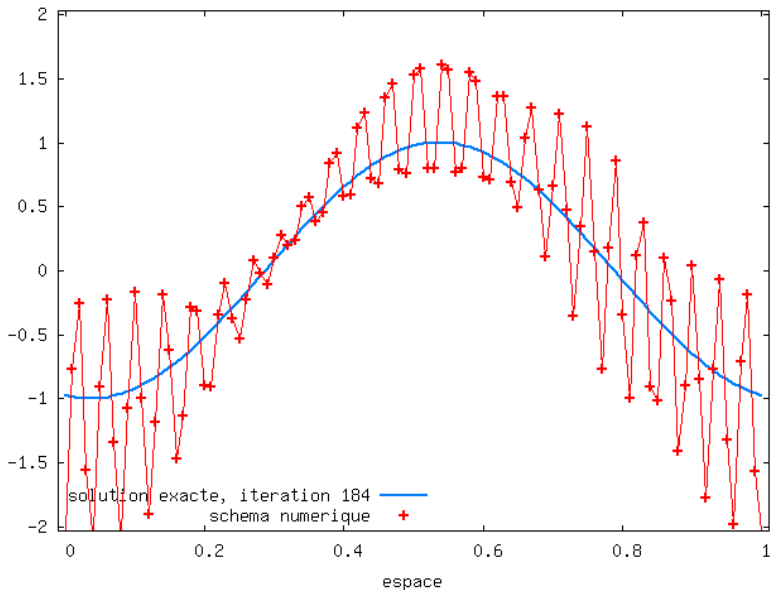


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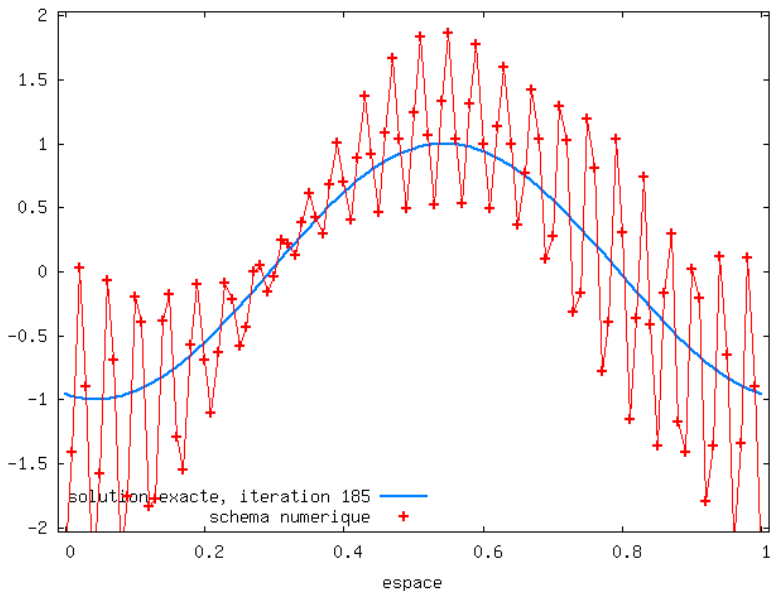




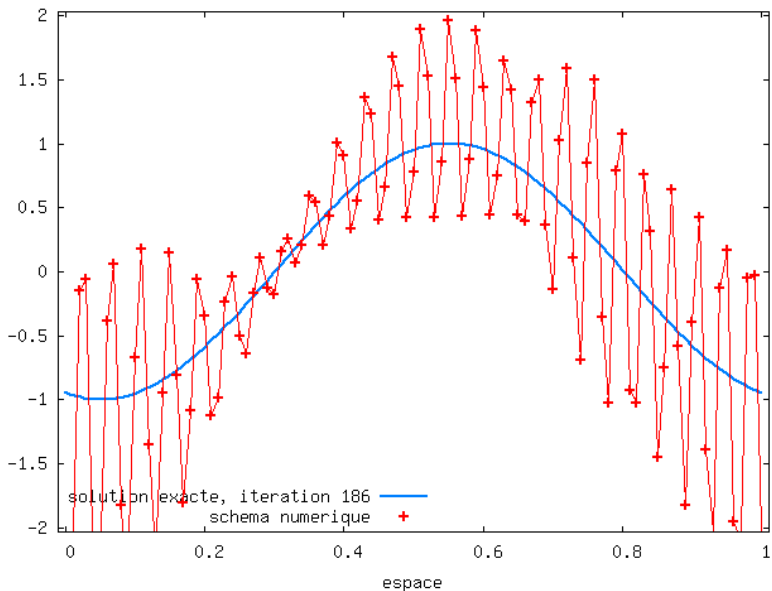
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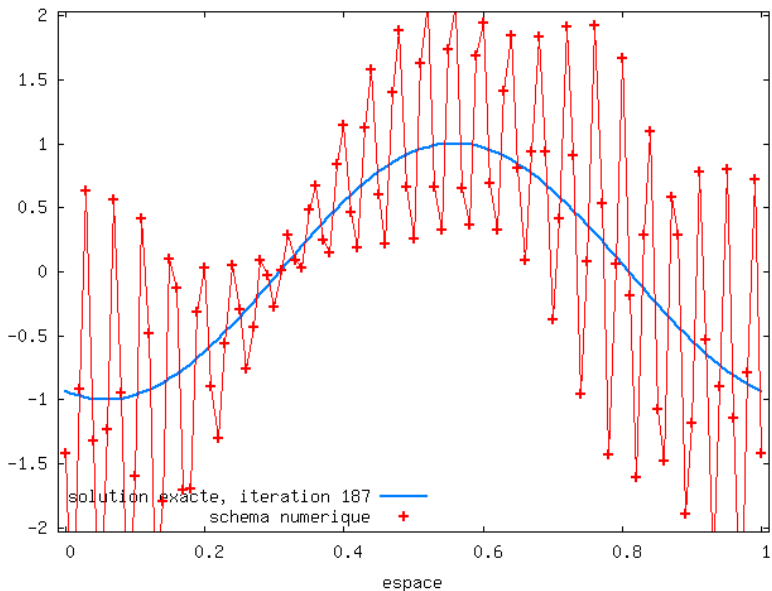
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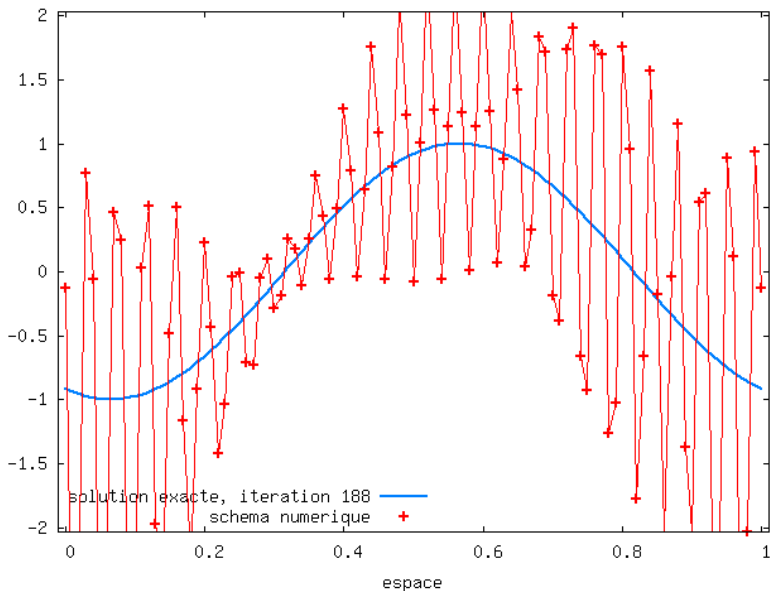
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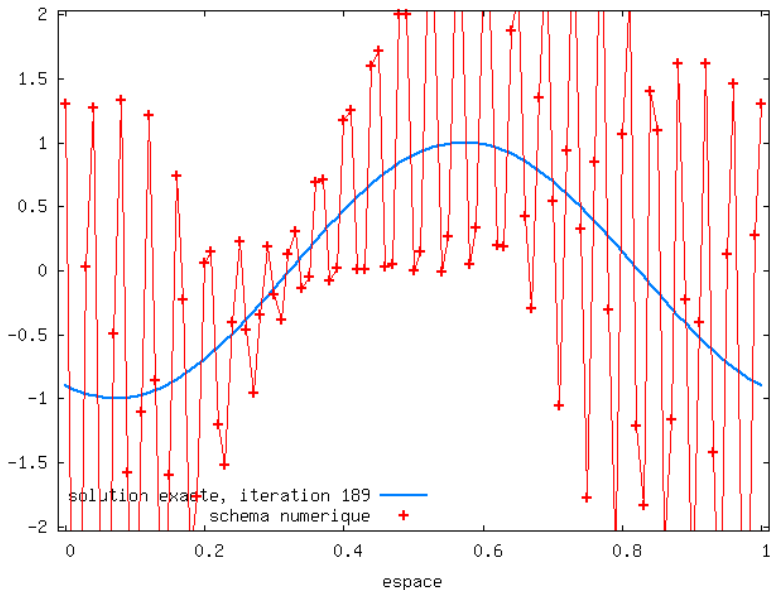
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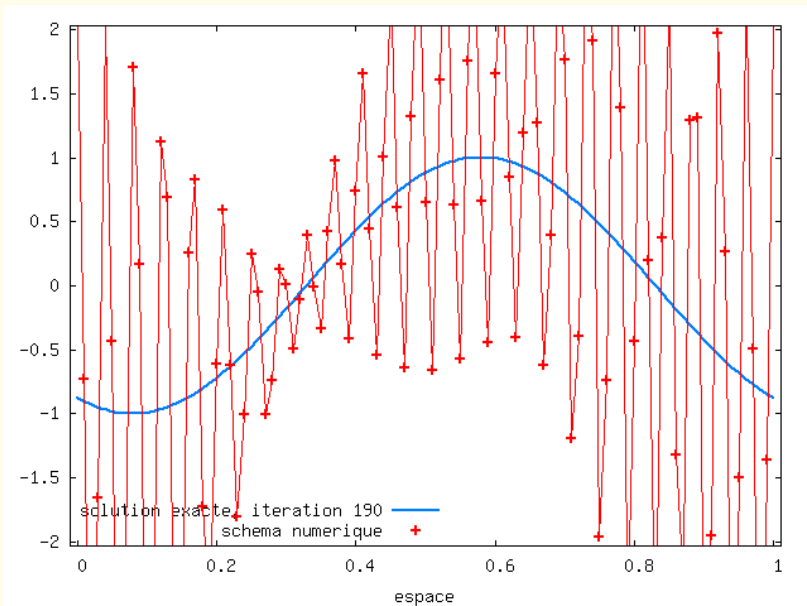
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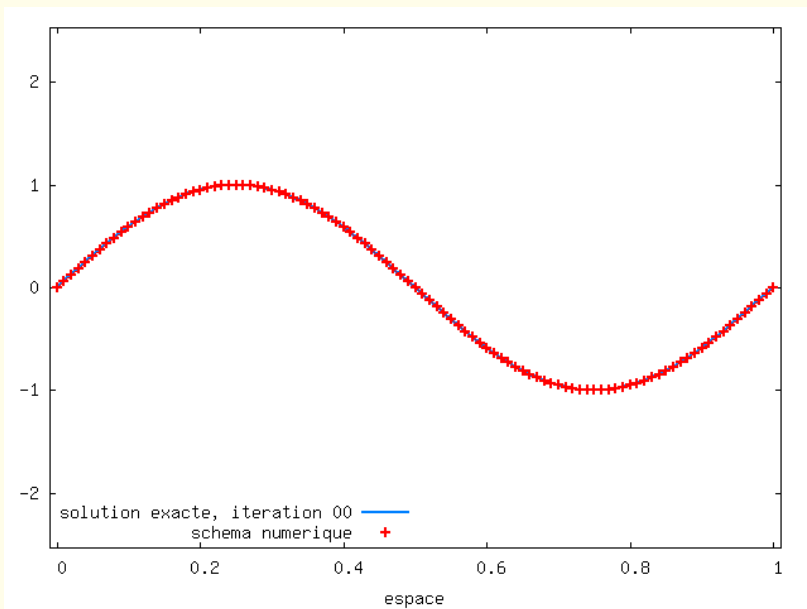
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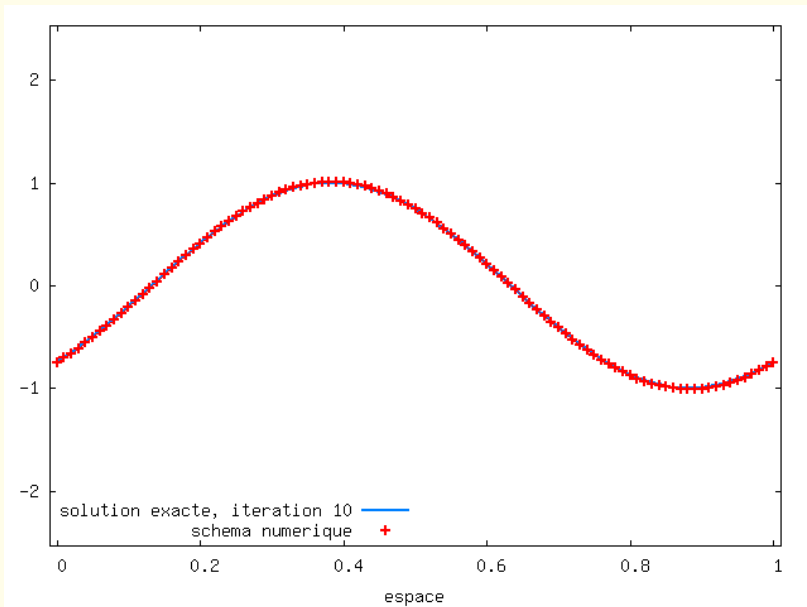


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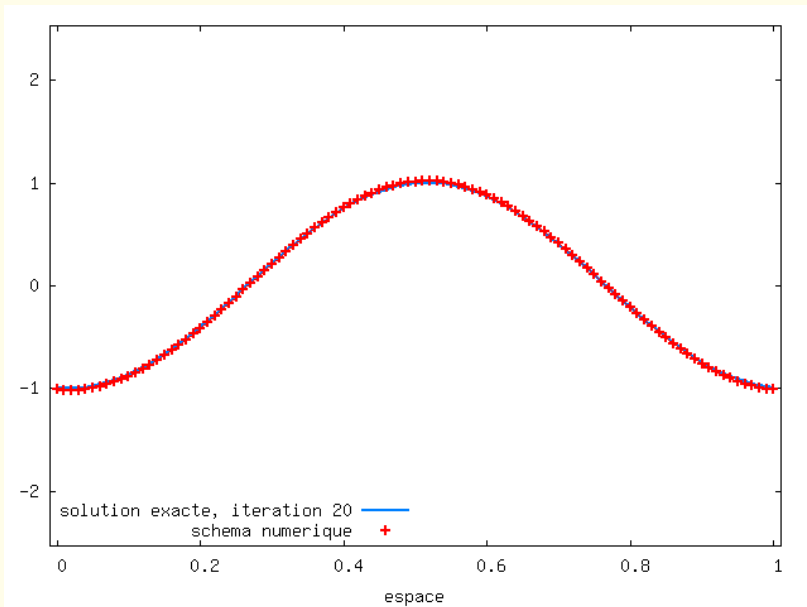




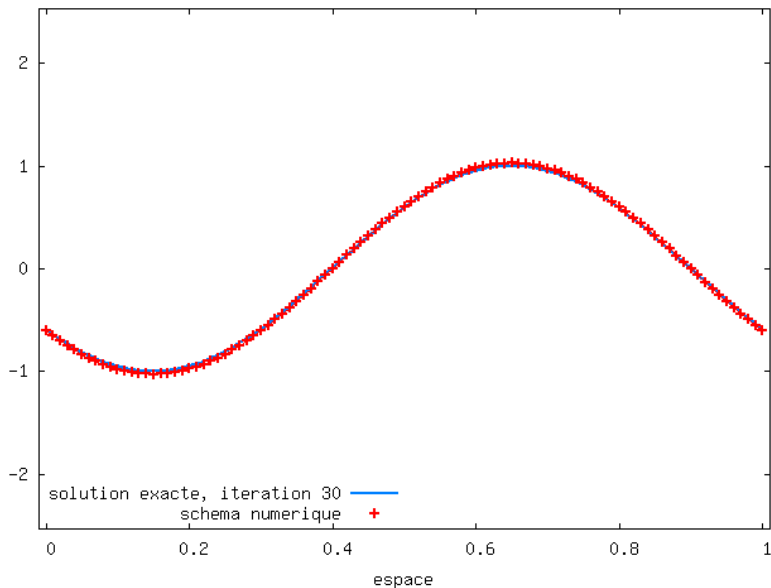
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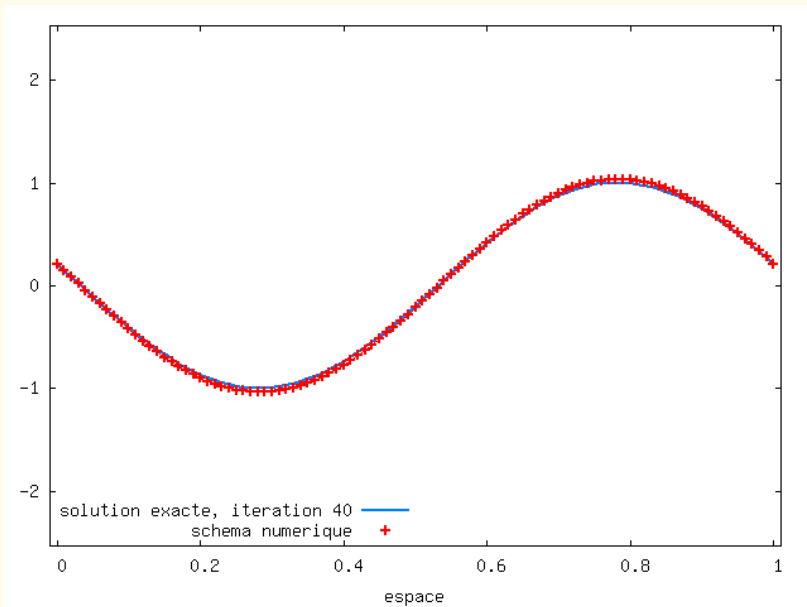
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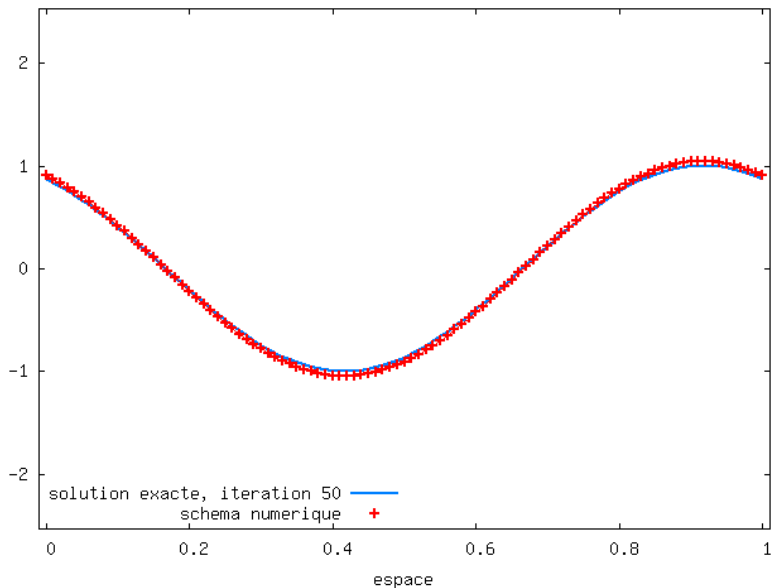
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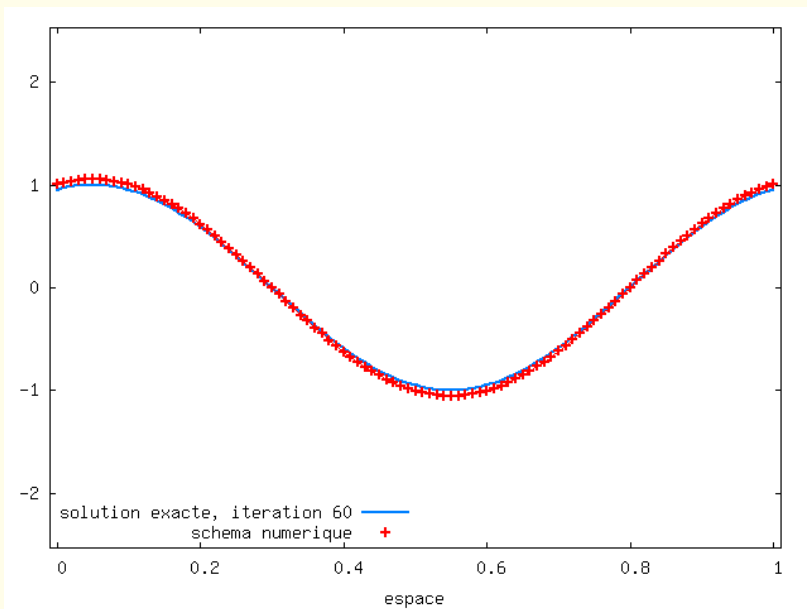
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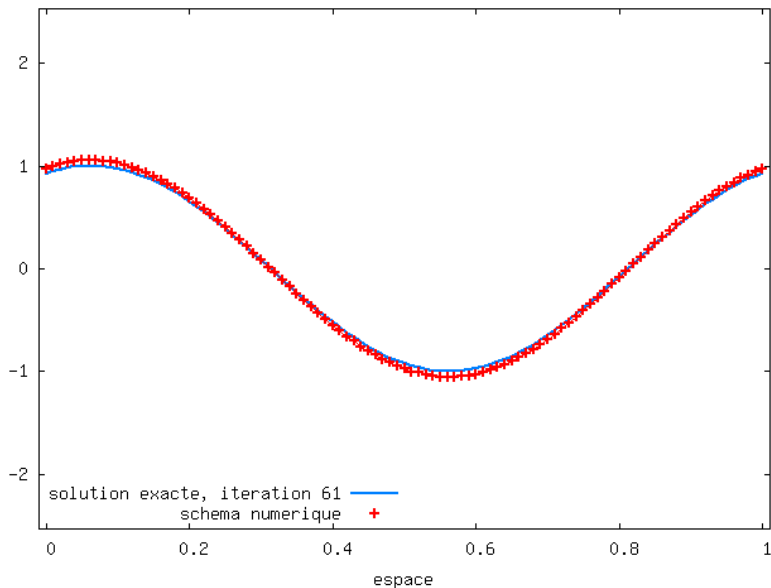
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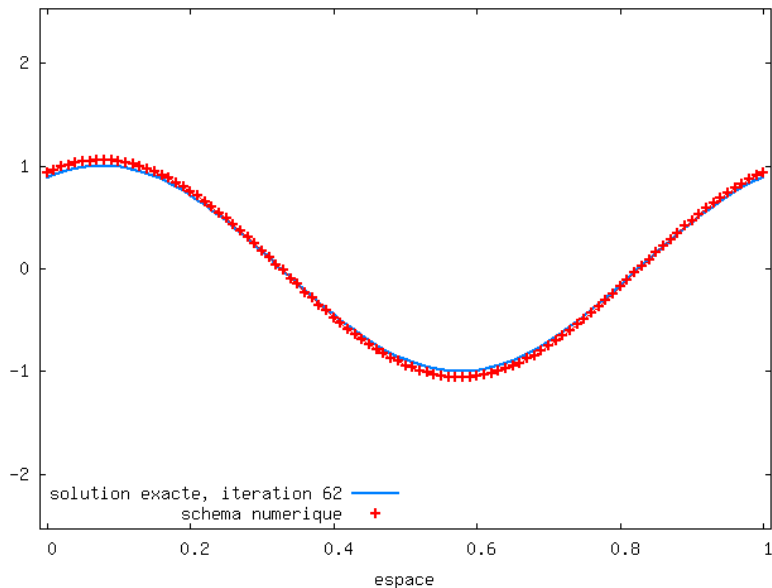
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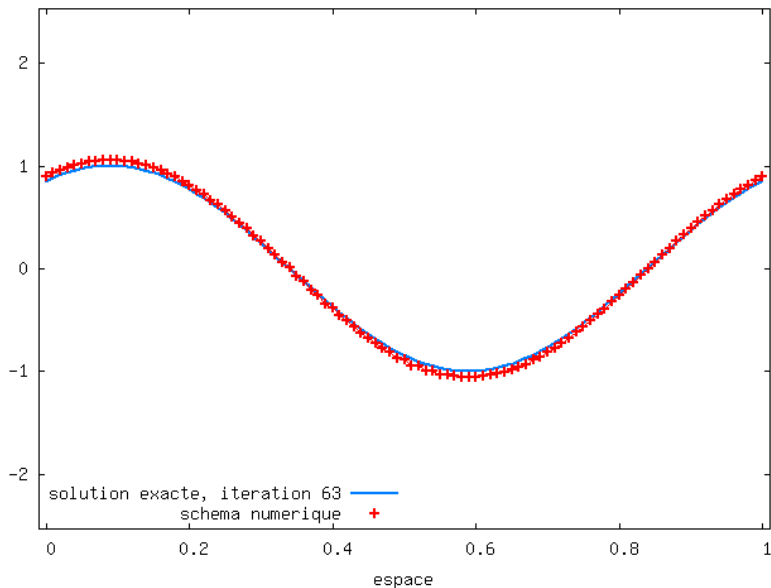


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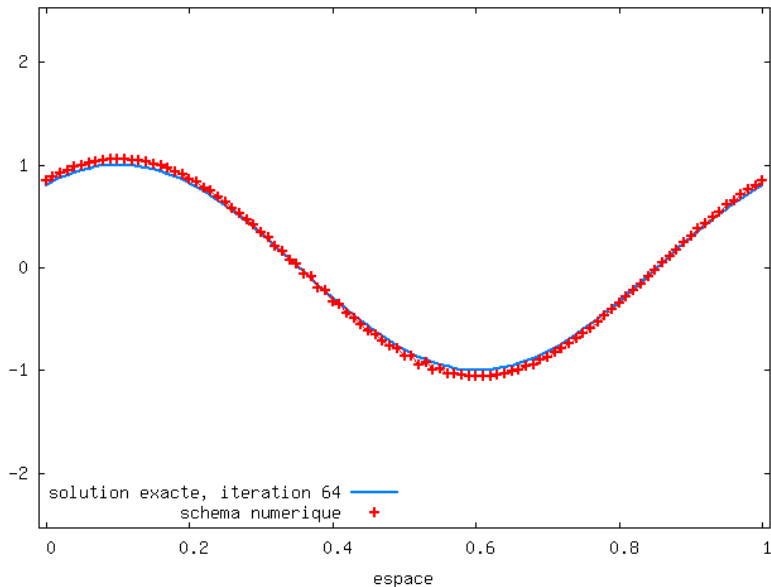




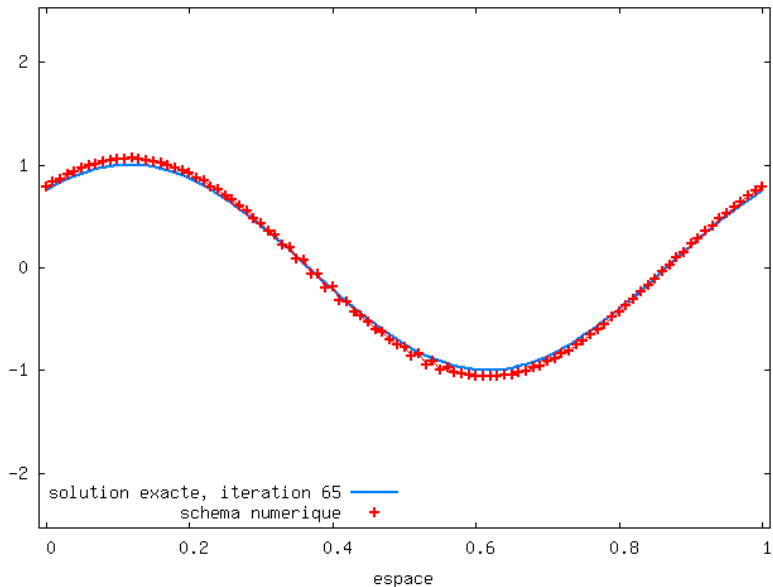
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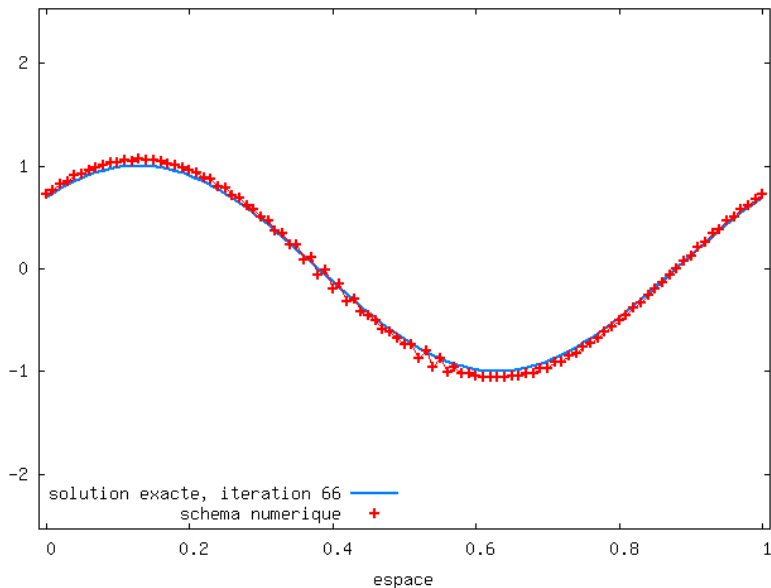
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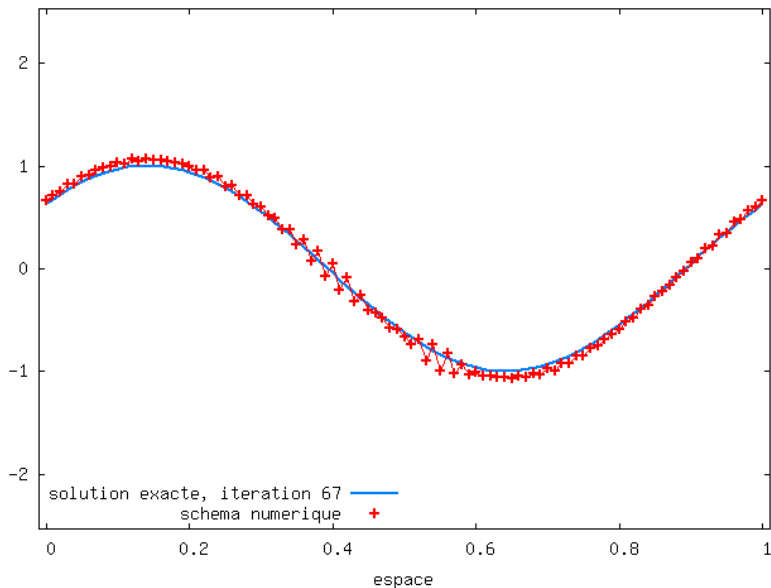
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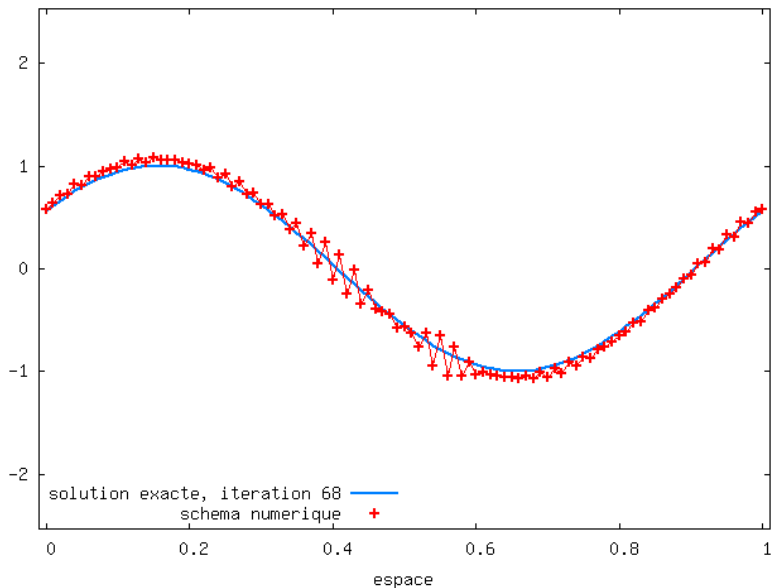
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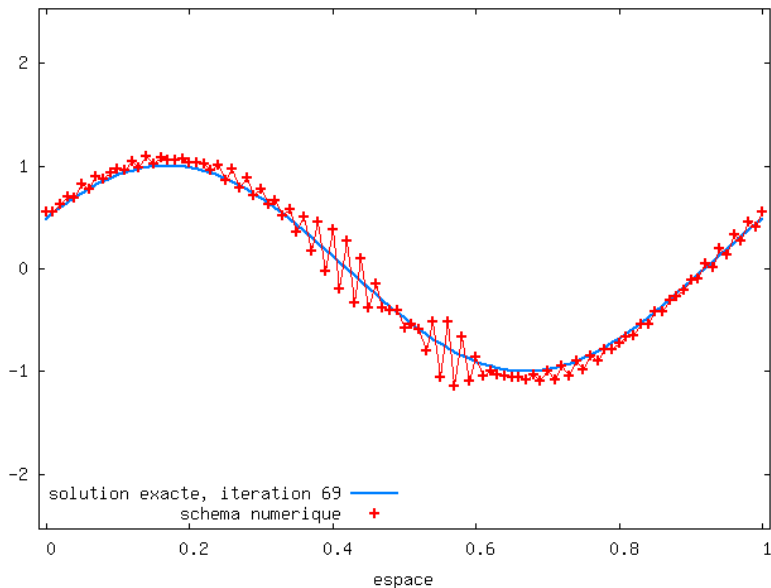
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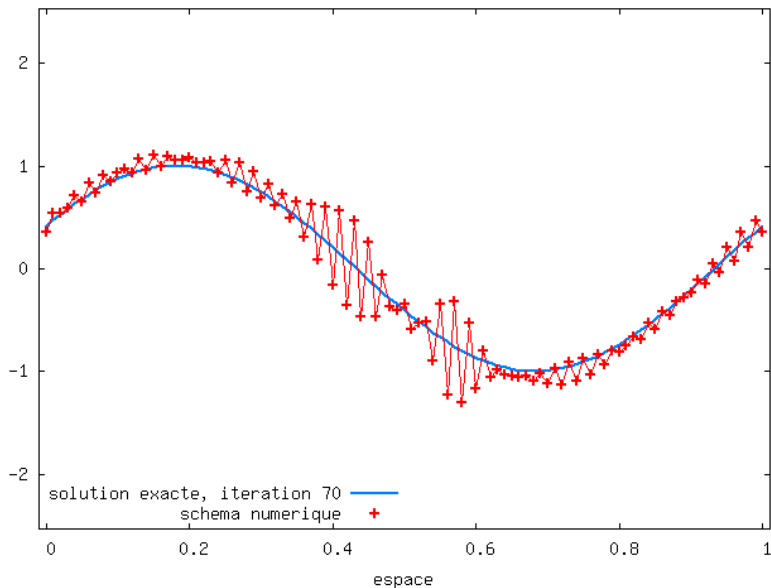
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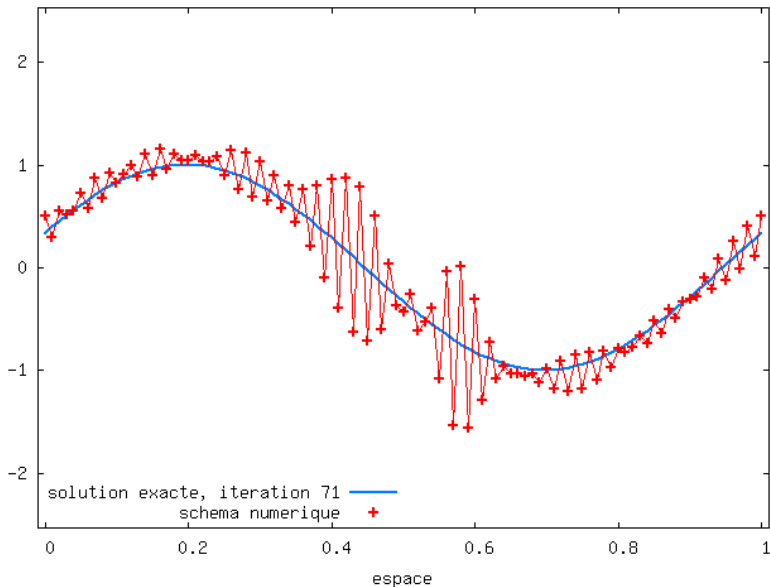


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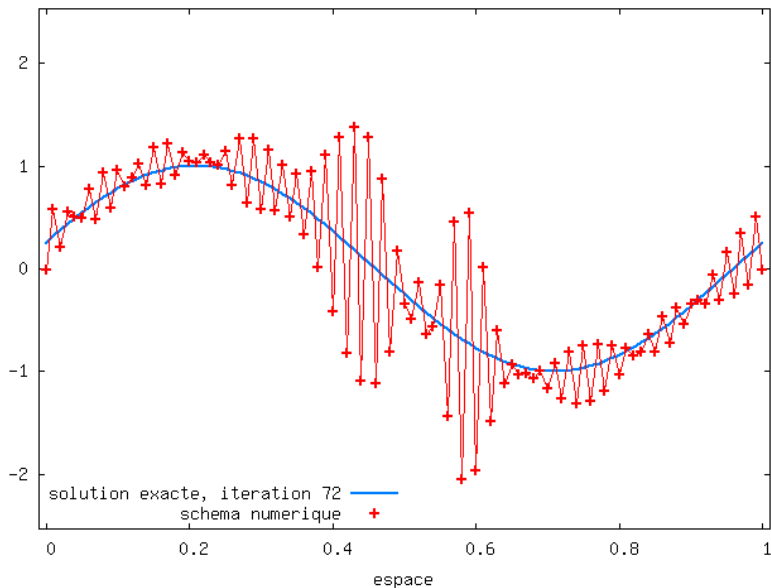




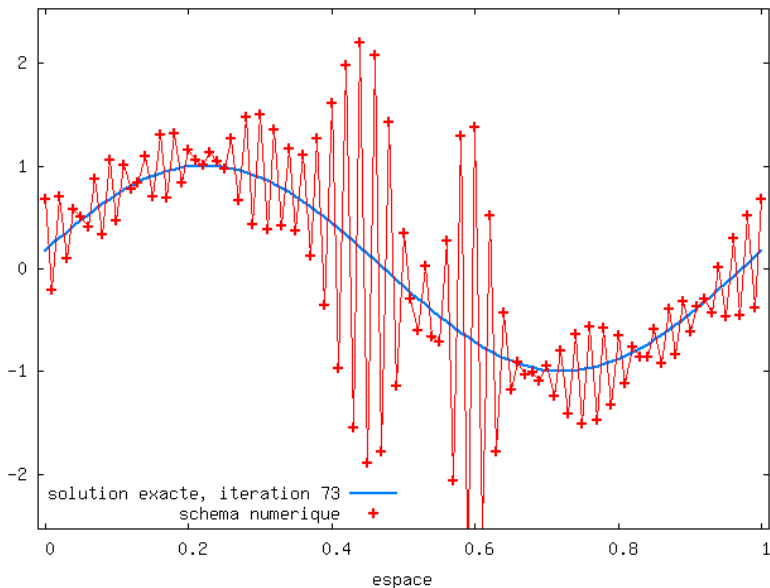
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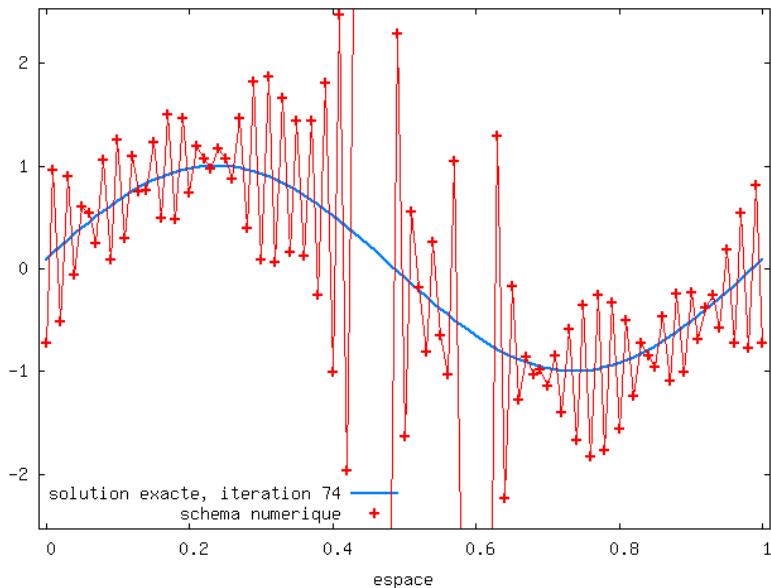
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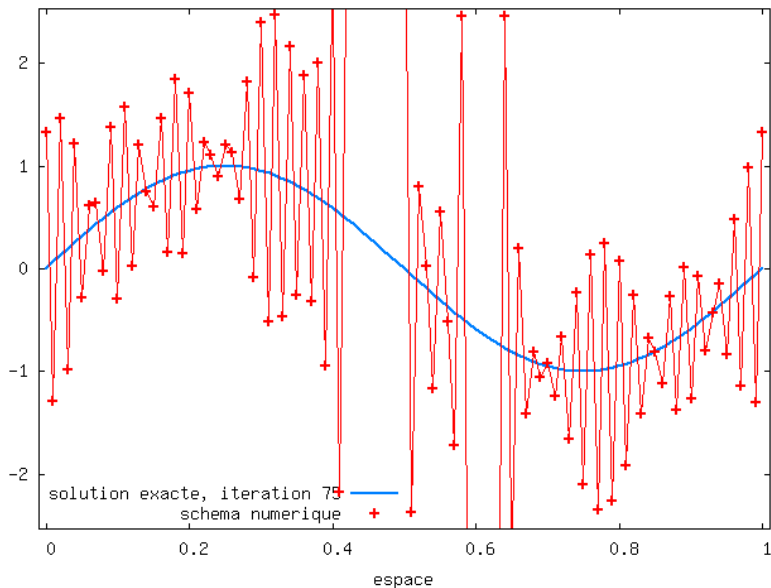
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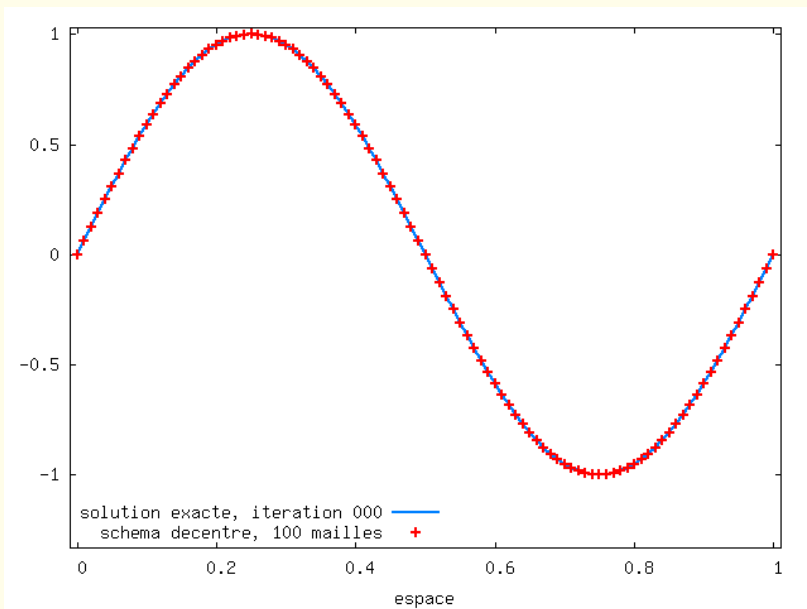
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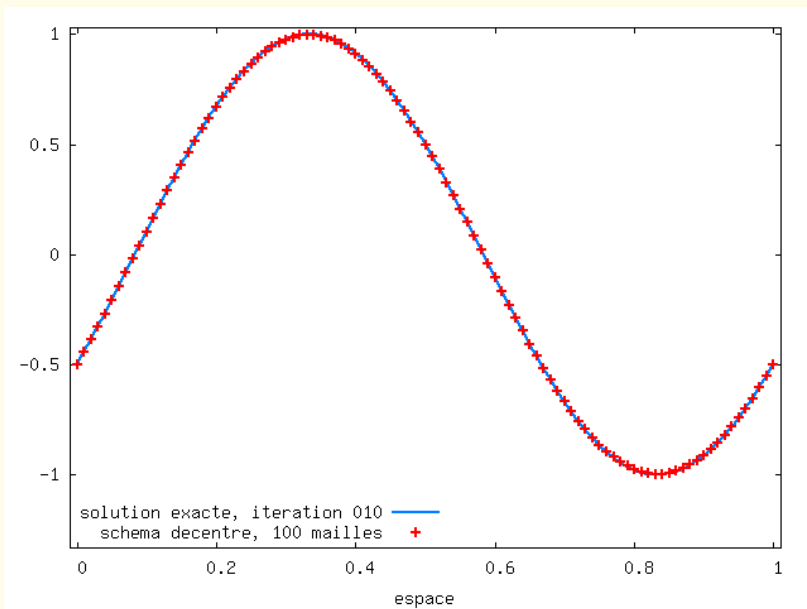
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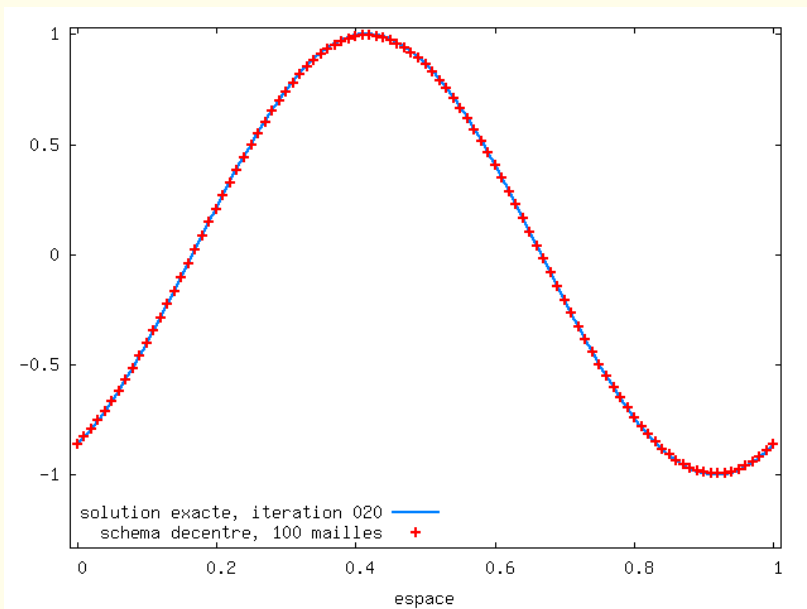
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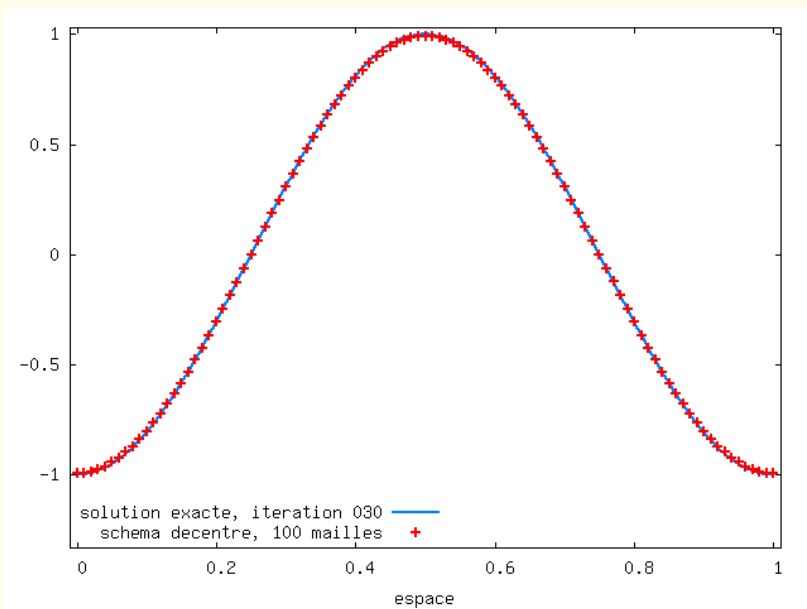


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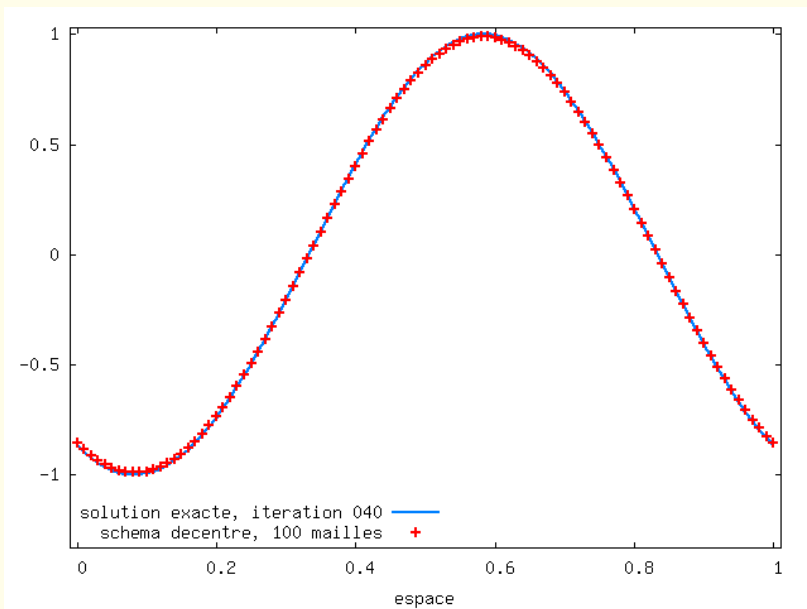




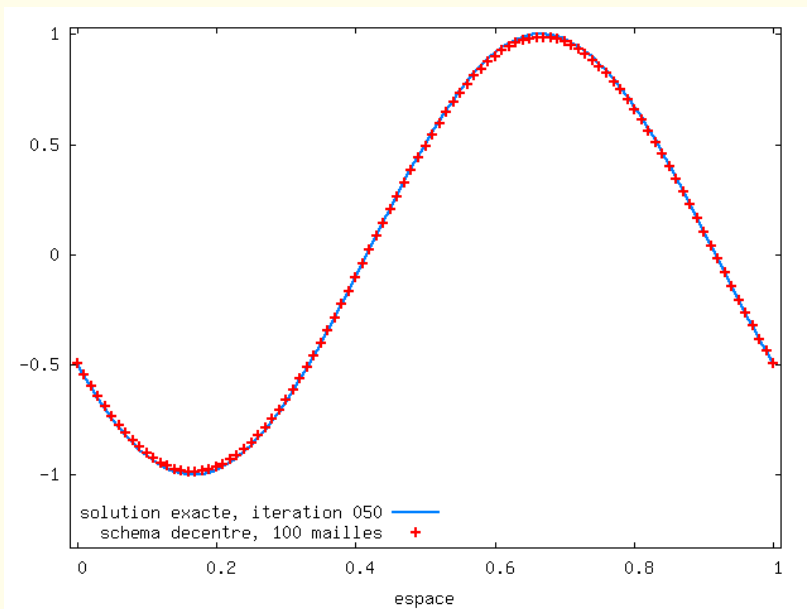
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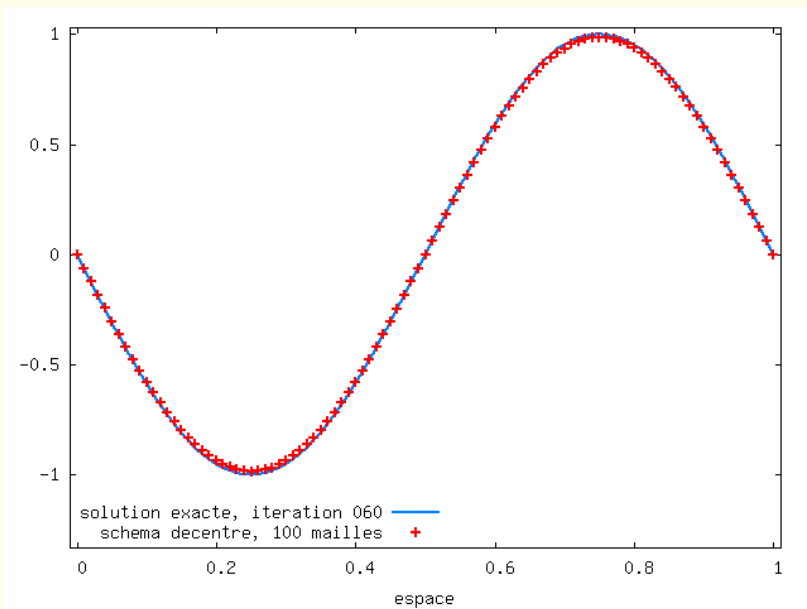
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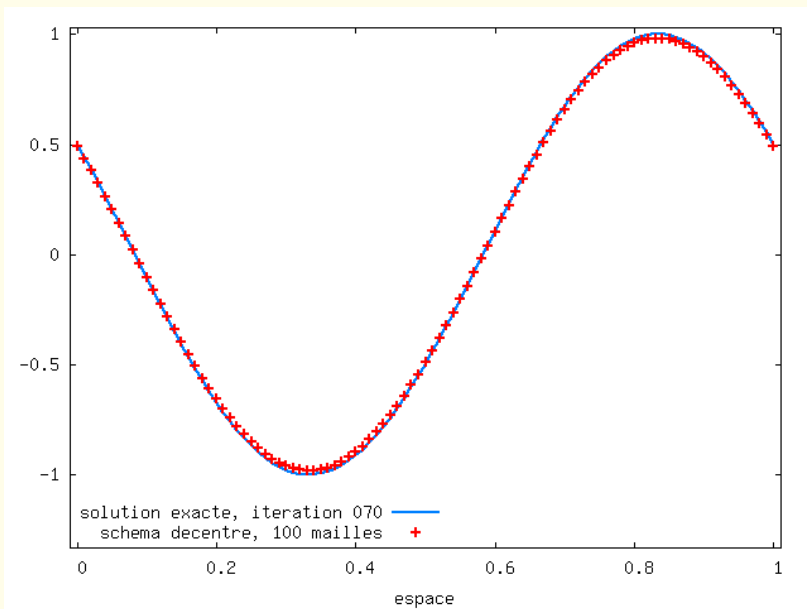
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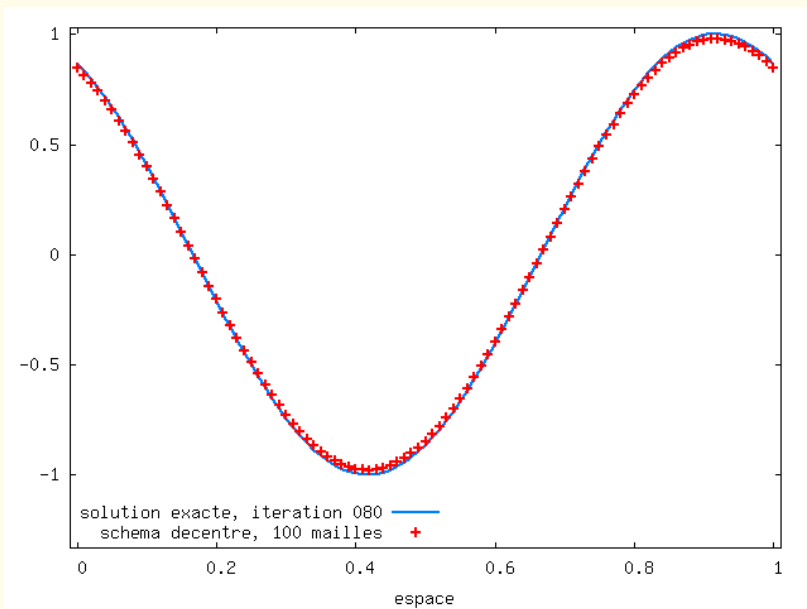
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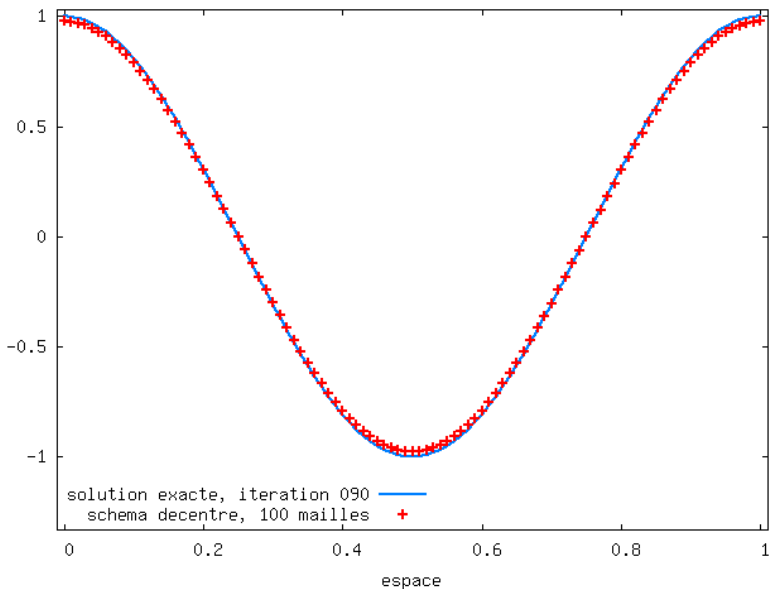
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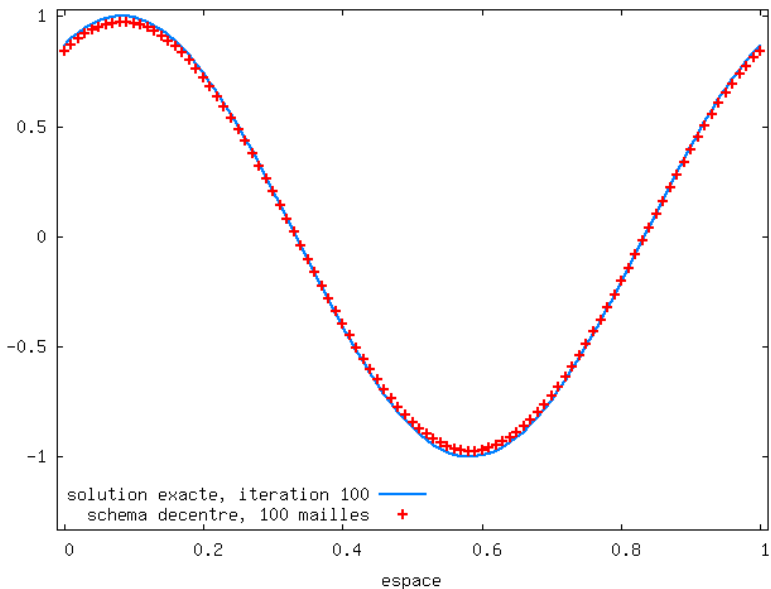
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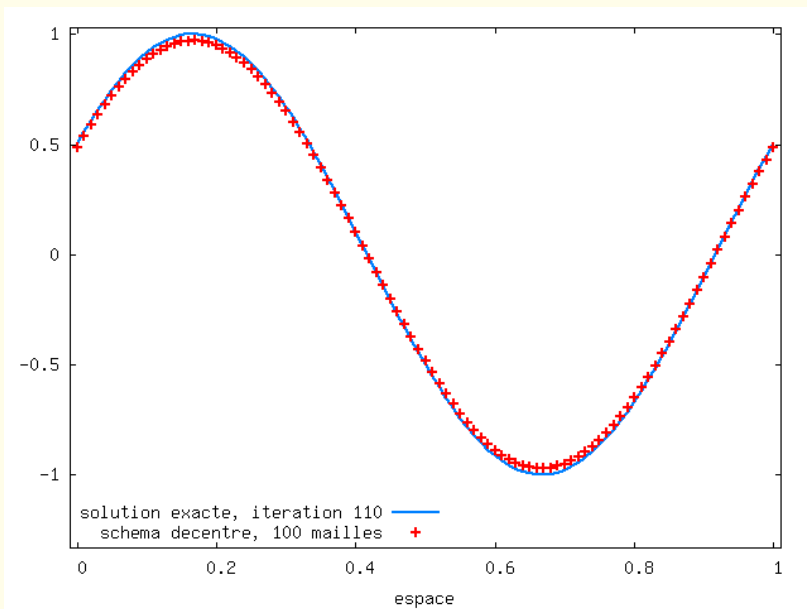


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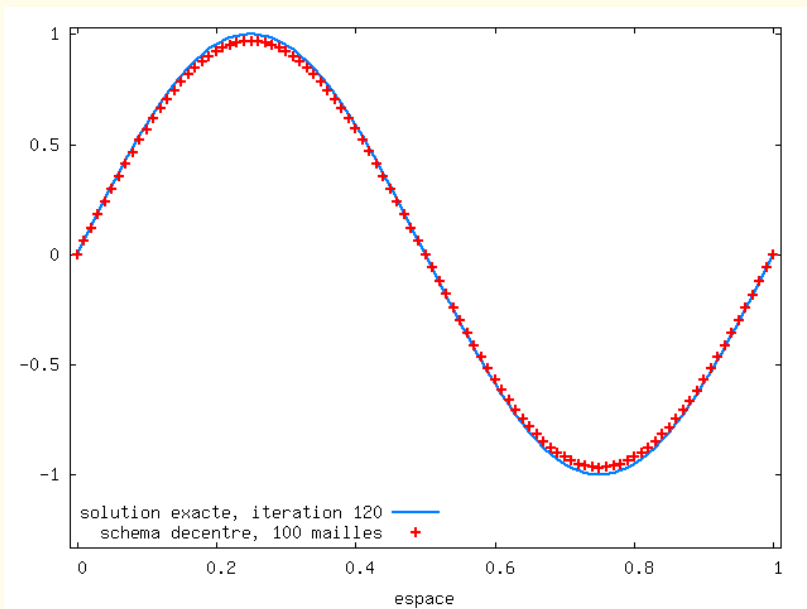




# Schéma décentré, $cfl = 0.8333$



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# Convergence du schéma décentré, pente = -0.9454

