

Problem Set 1

Problems to Computational Astrophysics, WS 2013/2014

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Hand in until Monday, 28.10.2013, 12.00 pm

Tutorial on Tuesday, 29.10.2013, 10.15 am

1. Finite difference quotients (P)

Derive finite difference quotients for

a) $f''(x)$,

b) $f'''(x)$,

c) $f''''(x)$,

using Taylor's expansion. For each of these difference quotients, draw the stencil and prove the order of accuracy.

Exercises marked with (P) have to be presented in the exercise, those marked with (H) have to be handed in. Programs can be sent per e-mail to sohlmann@astro.uni-wuerzburg.de.

