

STACK developer update

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June 2022

Thriving community....

- In-person conference in Austria, April 2022.
- See <https://stack-assessment.org/>
- Hosting with EDINA.

STACK 4.4

Due for release in June/July 2022.
(Testing etc. currently under way)

Overview

- Support for Moodle 4.0.
- Major rewrite of the PRT and CASText systems.
- New features.

Moodle 4.0

Major re-engineering of the question DB

- DB now store *versions* of the question.
- History of previous versions.

Please don't use older versions of STACK with Moodle 4.0!

Rewrite of the PRT and CASText

Major rewrite of the PRT and CASText systems, focus on performance and limitations of the previous systems.

Thanks to Matti!

- PRTs are now true 'if'-statements in the CAS.
(Single call to the CAS).
- The marks and penalty fields can be numbers, or other variables defined elsewhere in the question.
- Code and text fragments can be included with a URL.
Makes it possible for non-developers to create and use libraries.
- Text-files for download.
- Better support for Javascript.

Plenty of efficiency and security improvements as well...

Damerau-Levenshtein distance

For each step in the algebraic derivation, either complete the calculation in each step or explain what has been done.

Complete explanations

Solve this equation:

Factor the constant term

Simplify numbers

Hence

Check

Complete calculations

$$x^2 - 16 \cdot x + 39 = 0$$

$$(x - 8)^2 - 25 = 0$$

$$(x - 8 - 5) \cdot (x - 8 + 5) = 0$$

$$(x - 3) \cdot (x - 13) = 0$$

How does this work?

For each step in the algebraic derivation, either complete the calculation in each step or explain what has been done.

Complete explanations

Solve this equation:

Complete the squar

Factor the constant term

Difference of two squares

Simplify numbers

Hence

Check

Complete calculations

$$x^2 - 16 \cdot x + 39 = 0$$

$$(x - 8)^2 - 25 = 0$$
 ✓ The closest match was "Complete the square".

$$(x - 8)^2 - 5^2 = 0$$

$$(x - 8)^2 - 5^2 = 0$$
 ✓

$$(x - 8 - 5) \cdot (x - 8 + 5) = 0$$
 ✓

$$(x - 3) \cdot (x - 13) = 0$$

$$x = 3 \text{ or } 13$$

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This answer is invalid. When listing the values of a variable you should do so in the following way: $x = 3$ or $x = 13$. Please modify your input.

(In the dev branch if you would like a pre-release test.)

HELM Workbooks

See case study!

Conclusion

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