PROGRAMMING LANGUAGE LEVELS

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WHY HIGH-LEVEL LANGUAGES?

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1. CHECK YOUR UNDERSTANDING (1/1 point)

Which of the following are advantages of high-level languages over assembly language? [You must check ALL that apply to get credit]

- [x] It's easier to program in a high-level language compared to assembly language. ✔
- [x] High-level language programs are more portable than assembly language programs. ✔
- [x] High-level language programs are generally easier to understand than the equivalent assembly language program. ✔
- [ ] High-level language programs generally execute faster than the equivalent assembly language program.

EXPLANATION

The first three statements are correct. Writing programs in a high-level language is easier than assembly. These programs are portable in that they can be compiled to different instruction sets, and they are easier to understand.

However, they generally execute slower than the equivalent program written in assembly.

Final Check | **Save** | **Hide Answer** | *You have used 1 of 2 submissions*

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2. CHECK YOUR UNDERSTANDING (1 point possible)

Which of the following is **NOT** a true statement regarding interpretation versus compilation?

- (•) Interpreted programs are more portable than compiled programs. ✗
- ( ) Interpreted programs generally run faster than compiled programs. ✓
- ( ) Interpreted programs are easier to debug compared to compiled programs.
- ( ) An interpreter is not able to optimize a program as well as a compiler.

EXPLANATION

Interpreted programs are in a form that is ISA-independent, so they are more portable than compiled programs, which are specific to a particular ISA. However, due to the interpretation process, interpreted programs run slower than compiled programs, so the second statement is incorrect. While interpreted programs are easier to debug than compiled ones, the interpreter does not have the full view of the program like a compiler so it cannot optimize the program as well.

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