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2.) UNIX exec returns an error only when an error has occurred. When the return value is -1, it indicates an error. If the function return all, instead of replacing the calling process, an error could occur. There could be plenty of other reasons also for it to return an error. Some of them may include:

- The executable does not exist
- The executable exists, but cannot be accessed
- The executable exists but it cannot be executed without permissions

10.)

Program 1 Output: 6
6

Explanation: The variable named val holds the value 5. if(pid == fork()) creates a process and the wait function blocks the calling process until a signal is received.

Program 2 Output: 6

Explanation: In this program, val is printed out once in the screen because after the first condition, the child process exits after the first if statement resulting in only one value of val being printed on the screen.