Errata for Quantum Computing for Programmers

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This document contains errata and corrections for the book. It is being updated on a regular basis. Readers are encouraged to submit their findings to the email address noted in the open-source repository or the front matter of the book. Many thanks in advance!

Equation 1.6

This is embarrassing, but Equation (1.6) was mistyped. Fortunately, it is being used correctly in the rest of the text. The book states, incorrectly:

$$(A \otimes B)(a \otimes b) = (A \otimes a)(B \otimes b)$$

The correct form is, of course:

$$(A \otimes B)(a \otimes b) = (Aa) \otimes (Bb)$$

We use this property to apply a gate to individual qubits in a combined state. For example, to apply an X-gate to the second qubit only in a 2-qubit state, we use:

$$(I \otimes X)(\psi \otimes \phi) = (I\psi) \otimes (X\phi)$$

This mistake is repeated on page 30, where a copy of Equation (1.6) is presented.