Lecture notes

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LECTURE 1

Introduction and review

These are notes from lecture 1. Here is some text with math $x^2 + y^2 = x^2$, and also some display math;

$$\begin{aligned}(A \otimes B)(x_j \otimes y_q) &= Ax_j \otimes By_q \\ &= \left(\sum_i \alpha_{ij} x_i\right) \otimes \left(\sum_p \beta_{pq} y_q\right).\end{aligned}$$

Next we have a numbered equation:

$$\sum_i \sum_p \alpha_{ij}\beta_{pq}(x_i \otimes y_p). \tag{1}$$

We have the following example:

Example 1.1: Key example

An example with some text as well, and a reference [1] (to an article) as well as to an equation: (1). We can also reference a section in the following way: see section 1.

We can also reference Example 1.1.

LECTURE 2

Important theory

Here is even more text! And some boxes:

Important note.

This is urgent and important! (this probably will show up on the exam)

Note.

This is a remark of interest.

References

[1] Portugal, R. 2022. Basic Quantum Algorithms. *arXiv:2201.10574 [quant-ph]*. (2022).