Quantum Computing: List of Errors

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• Lecture 2 Slide 6 – distributivity condition wrong – final part should be $AC + BC$.
• Lecture 3 slide 17 - $P$ missing subscript $m$ in third equation
• Lecture 5 slide 18 - “one input two outputs” should be “two inputs one output”.
• Lecture 6 slide 5 - second last line, should be $1/\sqrt{2}$ not a half.
• Lecture 7 slide 16: $|\psi_3\rangle$ has an extra factor of $1/\sqrt{2}$ which shouldn’t be there.
• Lecture 8 slide 9 - braket messed up in second line of $W |\psi\rangle$
• Exercise sheet 2: Q10 (a) subscript should not have +1; also normalisations should be $\frac{1}{\sqrt{2^{n+1}}}$ in part (a).
• Line on slide 4 of lecture 9 should read:
  
  $|j_2\rangle \rightarrow \frac{|0\rangle + e^{\pi ij_2} |1\rangle}{\sqrt{2}} \rightarrow |0\rangle \frac{+ e^{\pi ij_2} e^{\pi ij_3/2} |1\rangle}{\sqrt{2}}$

• Line on slide 6 of lecture 9 should read:

  \[
  \frac{1}{\sqrt{N}} \left( (|0\rangle + e^{\pi ij_n} |1\rangle) \otimes \cdots \otimes \left( (|0\rangle + e^{\pi i(j_2+j_3/2+\cdots+j_n/(2^{n-2}))} |1\rangle \right) \right) \\
  \otimes \left( (|0\rangle + e^{\pi i(j_1+j_2/2+\cdots+j_n/(2^{n-1}))} |1\rangle \right)
  \]